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GET TO KNOW iOS 8

Unlock the new features in Apple's latest mobile operating system

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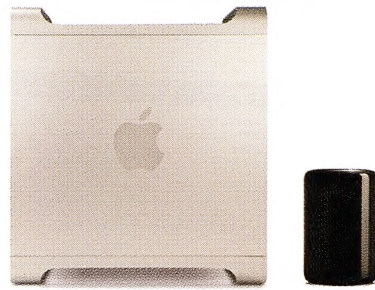
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Whether you're working on an urgent report or just sitting back playing your favourite games, the future of computing lies in the cloud.

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GET TO KNOW iOS 8

A lot of the improvements in iOS 8 are aimed at developers, who can now trick out their apps with support for Touch ID, extensions, widgets and HealthKit. But there are still plenty of goodies for users like us, too.

Regulars

Reviews

Another year gone

It has been 12 months since I sat in front of my MacBook Pro and started to reflect on 2013. It was a nice way to move into the new year, examine the changes to the tech industry and mull over my time with *Macworld Australia*.

The months since that reflection have seen Apple evolve its landscape, where iOS and OS X have taken a few strides towards each other, Beats by Dr. Dre took up residency in Cupertino and the company took aim at the wearables market.

As I did 12 months ago, I think it is time to go down memory lane and look at the five biggest releases of 2014.

5. iPad Air 2. The larger of the two iPads Apple launched in October, the iPad Air 2, received the biggest update for users. While the iPad mini 3 provided a gold colour option and Touch ID, the Air 2 was shaved in depth by 18 percent, the camera capabilities were boosted and an antireflective coating was applied to the display.

4. iOS 8. Apple's mobile operating system didn't see a dramatic facelift like its predecessor, but rather focused on developers. Encompassing over 4000 new APIs (application programming interfaces), including Touch ID, HealthKit and HomeKit, increased sharing options, third-party keyboards and Notification Center widgets, this was an update for those that make our iOS devices tick.

3. iMac with Retina 5K display. The iMac lineup has a new leader. With 14.7 million pixels, the 27in desktop Mac has a remarkable 5120 x 2880 display that uses 30 percent less power than its non-Retina counterparts.

2. OS X Yosemite. The free upgrades continued in October with the launch of Yosemite. Following in the shoes of iOS 7, OS X 10.10 has a new vibrant, flatter look and deeper integration with iOS 8 via Continuity. AirDrop, Instant Hotspot, Handoff and the ability to make calls and send SMSs from your Mac make this a fantastic release.

1. iPhone 6. Both the iPhone 6 and the 6 Plus sport a sleeker look, thinner body and the enlarged displays that many have cried out for when looking at Android rivals. It was a big move by Apple, which has been hesitant in the past to extend past four inches, and one that has paid off already.

STAFF PICKS

What will be the highlight of 2015?

JONATHAN STEWART

APPLE/BEATS EARPHONES
Apple's EarPods are acceptable, but with the Beats By Dr. Dre acquisition I'm looking forward to what will ship with the next-gen of iOS devices.

MADELEINE SWAIN

APPLE WATCH
I haven't worn a watch for about 25 years, but with a certain little device due next year, could I be tempted… could I?

TYNAN McCARTHY

HOMEKIT
Rumoured to be launching in early 2015, I can't wait to see all the crazy products that will be released at CES for HomeKit.
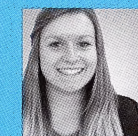
MONIQUE BLAIR

4K APPLE TV
My highlight of 2015 will be the arrival of a 4K Apple TV, if it indeed gets created.

(niche:) DIGITAL   SapphireOne.

HAVE YOUR SAY

LETTER OF THE MONTH

TOO THIN?

I know it's a marvel how thin these devices keep getting, but that is a kind of marketing sleight of hand. My partner got a new iPad Air the day it came out. It was so much thinner and lighter than her original iPad. She loved it. Two days later, she was a little careless setting it down on the table and the screen cracked.

At the Apple store a few hours after that, she was telling the shop assistant that the device was far too delicate for the purpose for which it was made. He was arguing that it was her fault, until two other people arrived with similar issues. One said that it cracked when they weren't even next to it. The iPad was replaced, but in order to preserve it, is now encased in an expensive shock proof, weather proof, person proof and chunky case. It's a lovely piece of tech, but it now weighs more and is thicker than her original iPad.

What would be really good is for the iPad, iPhone, etc to be made more robust, waterproof and have longer lasting batteries. If the size of our device is sexy enough to impress us when we buy it, surely it will still seem great a year or two later.

Udi

iTUNES ISSUES

iTunes 12 is a ridiculous, confusing and, as a result, time wasting change for change sake makeover. Who has time to learn how to navigate through Apple's latest idiotic rearrangement of controls?

Paul

Every version of iTunes becomes less intuitive and a bigger ergonomic disaster. Less intuitive drag and drop, buttons everywhere, changing buttons that vary with context, it's a surprisingly poor effort from Apple for what is a flagship program.

Michael

I, too, find the interface confusing, but it's a hell of a lot prettier than MS Outlook on Windows. They've embraced the 'flat' icon look, but the layout is a dog's breakfast.

Bob

Have to agree. Tinkering with the user interface for no real benefit is just annoying. And there is no real benefit. In fact it's worse, much worse than iTunes 11. Bring back the sidebar, please.

Graeme

iTUNES 12 LOOKS GOOD TO ME

Why do people complain about change? The new iTunes is absolutely gorgeous and works very well. I love how I can drag into Up Next, and the colours the Albums give off is visually stunning.

iTunes needed a facelift and I think they have done really well with this one. There is no need to relearn things, except for what is where, and once you can understand that, it's great to work in and play around.

Apart from backups, I hardly ever use iTunes anymore for my iDevices, but saying that, it's nice to see that the section is intuitive and minimal all in one go. Keep up the good work Apple, now please fix the Apple TV.

Brent
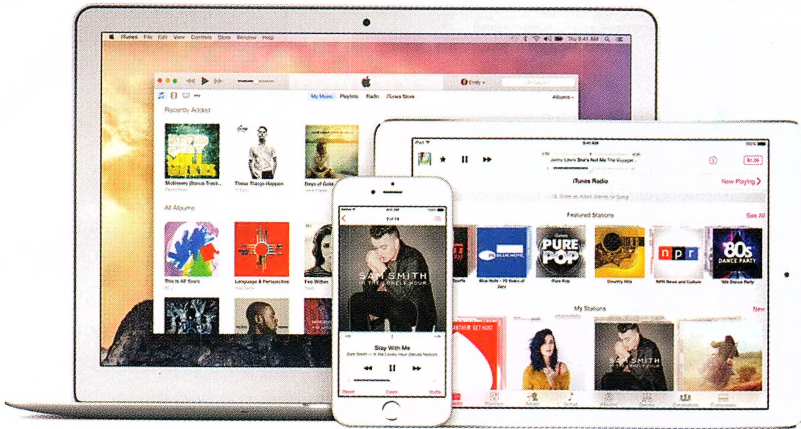
UPDATED TOO EARLY

In reference to the news article, 'Apple releases iOS and Yosemite updates to fix bugs, boost performance' (bit.ly/1tCxKPk), the update does not affect endless beach balls. Especially in Safari, Apple tries to fix details before what is important.

OS X Yosemite is such a disaster so far. It was released at a stage where it shouldn't have passed the beta test. It's quite unusual quality control for Apple and it was a big, big mistake to have chosen to upgraded. OS X Mavericks was a dream compared to this.
John

REROUTING THE WI-FI

In regards to the online article, 'OS X Yosemite update fails to solve Mac Wi-Fi mess' (bit.ly/12j6cbo), I had no Wi-Fi problems at all with Yosemite initially but, when I downloaded the update in November, I immediately had the Wi-Fi drop off every 10 seconds or so. I would reconnect and it would drop off again. I read widely searching for a fix, tried a few network settings things, nothing worked. Strange thing though, I noticed it was affecting other computers in the house the same way – that had not even upgraded to Yosemite at all, which led me to a simple solution – reboot the router! Duh... and everything is fine now, on my MacBook Air with Yosemite 10.10.1 and the rest... Hope that works for others.

I still think the update somehow caused the problem though and somehow did something to the router settings since these other non-Yosemite machines were also affected – and this all happened within minutes of the update! Strange...
James
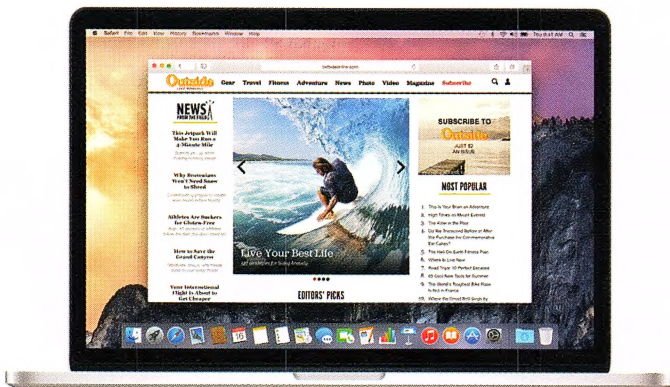
This month's prize to the *Macworld Australia* reader who has submitted what we think is the most interesting letter is an Apotop APT-DW21 Wi-Copy Wireless Smart Device, worth $129, from Anyware.

The Apotop Wi-Copy allows users to wirelessly connect SD cards and USB flash drives with their smartphones and tablets, enabling them to transfer and store photos, music and documents without their laptop.

The Apotop, which sports a 14-hour battery life, can also convert an internet cable into a Wi-Fi hotspot, letting multiple devices connect to the web.

www.anyware.com.au

HOT STUFF
A selection of Apple, Mac and iOS news from Macworld.com.au

To honour World AIDS Day, every product we sell today will support (RED)®.

APPLE TURNS 25 APPS (RED) IN CAMPAIGN TO FIGHT AIDS

Apple launched a two-week fund-raising campaign to mark World AIDS Day in November, with the proceeds from the sale of 25 limited-edition apps and a portion of online and retail sales going to the Global Fund.

The company has been a contributor to (Red), the charity co-founded in 2006 by U2 front man Bono to fight AIDS and HIV in Africa, since its start.

Then-CEO Steve Jobs kicked off Apple's participation with a special-edition iPod nano in October 2006. Since then Apple has given US$75 million to the Global Fund.

Last year's campaign marked Apple's broadest collaboration with the project.

"For eight years, our customers have been helping fight AIDS in Africa by funding life-saving treatments, which are having a profoundly positive impact," said CEO Tim Cook in a statement.

World AIDS Day, 1 December, is a 26-year-old coordinated effort to raise awareness of AIDS, educate people about HIV and commemorate those who have died of the disease.

Apple donated all proceeds from sales through to 7 December of the 25 (RED)-edition apps and the special in-app purchases within those apps, to the Global Fund, the world's largest financier of anti-AIDS, -tuberculosis and -malaria programs.

The iOS apps ranged from Paper by FiftyThree to Clear to *Clash of Clans* and *Despicable Me*. Those apps were tweaked with new (Red)-themed icons, and most offered specially-designed in-app purchases for existing users.

Additionally, an undisclosed portion of all sales through Apple's online stores and its chain of retail outlets on Black Friday, 28 November, and Cyber Monday, 1 December, were given to the Global Fund.

Those days are among the largest retail sales days on the technology calendar.

APPLE'S US$450 MILLION EBOOKS SETTLEMENT GETS FINAL APPROVAL

A federal judge in New York gave final approval in November to a settlement in which Apple will pay US$450 million for its role in a conspiracy to fix prices for ebooks.

Judge Denise Cote of the US District Court in Manhattan called the settlement "fair and reasonable". It requires Apple to pay US$400 million to consumers who bought certain books between 2010 and 2012, as well as US$50 million in attorneys' fees.

Although the settlement is final, Apple only has to pay that amount if it loses its appeal of a 2013 price-fixing ruling. If the appeal is successful, Apple will pay only US$50 million to ebook purchasers and US$20 million to attorneys.

Lawyers for the ebook buyers have said they "strongly believe" that Apple's appeal won't be successful.

The iPhone maker was found guilty in 2013 of conspiring with five big publishers to inflate prices for electronically downloaded books. The publishers – Hachette, HarperCollins, Macmillan, Penguin and Simon & Schuster – had already settled the charges against them for US$166 million.

If Apple's appeal is unsuccessful, there will be US$566 million in total to divide among the affected consumers. They include millions of people who bought certain books from the five publishers between April 2010 and May 2012.

APPLE STRIKES APP STORE DEAL WITH UNIONPAY, CHINA'S MASSIVE BANK CARD PROVIDER

Millions of Chinese are now be able to buy from Apple's App Store through the country's major domestic banking card provider, in a deal that could help the company squeeze even more revenue from one of its biggest markets.

China is already Apple's second largest market for app downloads. But before November, Chinese customers wanting to buy paid apps had to use an international credit card service such as Visa, or go through several steps to transfer funds from a local bank account.

Apple's App Store now accepts China's UnionPay as a payment option for customers in the country. Chinese users can now link their Apple ID with a UnionPay debit or credit card to make 'one-tap' purchases on the app platform.

The Chinese payment provider has released over 4.5 billion UnionPay cards across the world, according to Apple.

"The ability to buy apps and make purchases using UnionPay cards has been one of the most requested features from our customers in China," said Apple senior vice president Eddy Cue in a statement.

Apple expects that China will eventually overtake the US as its number one market, and so the company has been building new stores in the country and striking up partnerships with local players.

Even though China may be Apple's second biggest market for app downloads, the country still lags behind second place Japan in terms of App Store revenue brought in, according to analytics firm App Annie. The US, meanwhile, remains the biggest market.

In China, sales from Apple's app store are "still on a strong upward trajectory," App Annie said in a July report, adding that revenue jumped 20 percent from the first quarter to the second quarter. Much of that growth came from Apple making a deal to finally sell iPhones through the country's largest carrier, China Mobile, early in 2014.

TABLET FEVER CALMS DOWN AS iPAD SHIPMENTS DECLINE

It's time to kiss the tablet boom goodbye, as shipments of the once-dominant Apple iPad decline amid a worldwide slowdown for the devices.

Shipments of all tablets worldwide will increase by just 7.2 percent in 2014, compared to 52.5 percent in 2013, according to a projection from research firm IDC. Tablet shipments in 2014 will total 235.7 million.

The numbers reflect widespread reliance on PCs and smartphones for computing and communicating. Buying trends show that consumers and businesses still look to run full-fledged applications on PCs, which have experienced a jump in sales recently.

Otherwise, users are hanging on to tablets longer than expected, which is one reason for the slowdown in tablet shipments, IDC said. Tablet refreshes were expected every two to three years, but owners are holding on to devices for three years and longer, IDC said. New software can run on old devices, and there is no compelling reason for tablet owners to upgrade, IDC said.

IDC's numbers include hybrid devices that are mainly tablets, but can also be laptops when needed with keyboard attachments. The increase of shipments of such devices, which mostly run Windows 8, was just four percent.

IDC is projecting shipments of Apple's iPad to be 64.7 million units in 2014, a decline of 12.7 percent compared to 2013. Apple has reported declines in iPad shipments in recent quarters, but iPhone and Mac shipments increased in the most recent, October fiscal quarter.

As expected, Apple CEO Tim Cook has expressed hope that iPad shipments will return to growth. Apple could get a major boost through an enterprise partnership with IBM to deliver mobile devices with customised cloud, management and analytics software.

Android and Windows device shipments, however, are increasing at the expense of iPads. Shipment of tablets with Android will reach 159.5 million units in 2014, growing by 16 percent. Samsung, Lenovo, Asus, Amazon and others sell Android tablets.

The shipment of Windows tablets and hybrids totalled 10.9 million, growing by 67.3 percent. Microsoft's Surface Pro 3 is the most well-known Windows tablet.

IDC is projecting tablet shipments to continue slowing down into 2018, when yearly growth will be just 5.4 percent. But the research firm also noted that Windows 10, Google's operating systems and Apple's product expansion were 'unknowns' that could impact tablet shipment numbers.
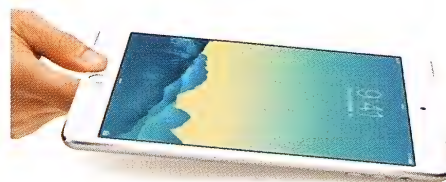
Snow in Arrowtown

This month's winner comes from across the Tasman Sea, where the snowfalls are plentiful.

The snow-lined main street in Arrowtown, New Zealand takes centre stage this month, with this beautiful picture from Henry Crawford.

"Arrowtown is an old gold mining town, pretty faithfully preserved," Henry says. "The shops still have verandahs! It is situated on the Arrow River, which was one of the richest gold rivers in the world. The town is a tourist hub now and is 18 minutes' drive from Queenstown."

A local resident of Arrowtown, Henry says he was heading to the shops when he took the shot.

"We live in Buckingham Street, Arrowtown, just near a section of old miners' cottages, which have been restored by the Council (thankfully). Locals get very excited when the first snow of the year arrives.

"I took this as I walked (slid, really) to the shops. It was taken in winter 2013, but seems appropriate to use as a Christmas card, I thought. I was lucky that there were few cars except one classic car belonging to a local art gallery."

Henry sees the portability of smartphones as a clear advantage over current cameras, and looks forward to the possibilities of high-quality smartphone cameras in the future.

"I usually have my phone in my pocket and can grab a nice shot if I see great light… I think the first mobile manufacturer who really seriously deals with high-quality in-phone images, will scoop the market."

Henry, who moved to the area from the US 18 months ago, has a few favourite applications when it comes to editing his photos.

"I have just started to use Lightroom and Photomatix, inspired by Trey Ratcliff. Trey is a genius in my opinion. I'm not alone, as he has in excess of 13 million followers on social media. His website (www.stuckincustoms.com) receives around 150 million page hits a day... He is an inspiration to many aspiring photographers, as well as experienced ones."

Henry also has some advice for fellow photographers.

"I worked as a TV drama producer for many years and had the opportunity to see many images in a screening room. I used a director of photography called Russell Boyd on my Emmy-winning miniseries, *A Town Like Alice*. When I asked him if he saw composition in frames, he said, 'No, I only see light.' Pretty good advice, I think. It's all about being aware of your surroundings and snapping with almost anything if you want to capture the moment. I have been really quite astounded at what great images I have pulled from my iPhone 5.

"There is quite a famous photographer quote I'd like to leave you with. When asked if he had a favourite picture, he said, 'The one I take tomorrow'."

A love letter to the Apple logo

Like a lot of us, I miss the classic, rainbow Apple logo – the real Apple logo. Actually, what I miss even more than the abstract idea of the rainbow Apple logo are the little badges that used to be affixed onto Apple hardware, stuck into a perfect, slight recess in the plastic.

There was something intensely pleasing, wasn't there, about how it was glossy and smooth, nestled in that sea of roughly textured black plastic – a wave-polished pebble on a sandy beach? Of course, for most of its life, following its introduction on the Apple II in 1977, it adorned not black computers but beige, such as the Macintosh Classic II.

I don't think I've ever quite got over the childlike excitement I get from seeing that logo, that badge, on a computer. It speaks to me of delight and quality and, frankly, a kind of exclusivity and unattainability; we had Amstrad PCWs at home in Scotland when I was a kid because there was no way we could afford a Mac. This is a big part of the reason I have a terrible weakness for buying vintage Apple stuff on eBay now – it's because for a few bucks I can actually own the things that I yearned impotently for when I was a youngster.

Apple's first CEO Michael Scott called it "the most expensive bloody logo ever designed", partly because colour reproduction used to be vastly more expensive than black and white 30-some years ago. From the very beginning, though, its designer, Rob Janoff, presented monochrome and metallic versions alongside the rainbow one, a necessity since full-colour reproduction everywhere was impractical. So you could say that ditching the coloured stripes was at least as much a retro move as keeping them!

I think I love it so much to this day, though, because it so obviously is an expensive badge to add to a computer; it's not just something silk-screened on as they roll off the assembly line.

When Apple jettisoned the rainbow Apple logo, the company said, "We've reduced some of the clutter in the original design […] Instead of rainbow stripes, solid colours. Instead of just one solid colour, a palette of logo colours to suit a variety of uses. Solid colours emphasise the timeless shape of the Apple logo."

And I guess they're right – the current, clean logo, which these days you usually see as a simple silhouette or lit up on a laptop lid, certainly doesn't seem retro like the rainbow one. But for me at least, it's just not as exciting. There's something wildly satisfying and compelling about these old badges – the promise, always delivered-on, of an experience like no other available at the time.

The writing was on the wall, of course. On the last Mac ever to sport the rainbow badge, the PowerBook G3, the lit-up logo on the back was pure white. In those days, the Apple logo was the right way up as the laptop faced you when you opened it, but this meant that when it was open, the logo appeared upside down. Why? Because Steve Jobs put the user's needs first. But as Ken Segall recounts in his book *Insanely Simple*, "Look around today and the answer is pretty obvious. Every laptop on earth has a logo that's right-side-up when the machine is opened. Back then, it wasn't so obvious, probably because laptops were not yet ubiquitous."

Mind you, those glowing logos were white presumably as much for dull practical reasons as for any strategic branding ones; the way they work is by essentially cutting a hole in the lid to allow the backlight that makes your screen glow to leak out the back, and making them multicoloured would have added complexity. 🖱
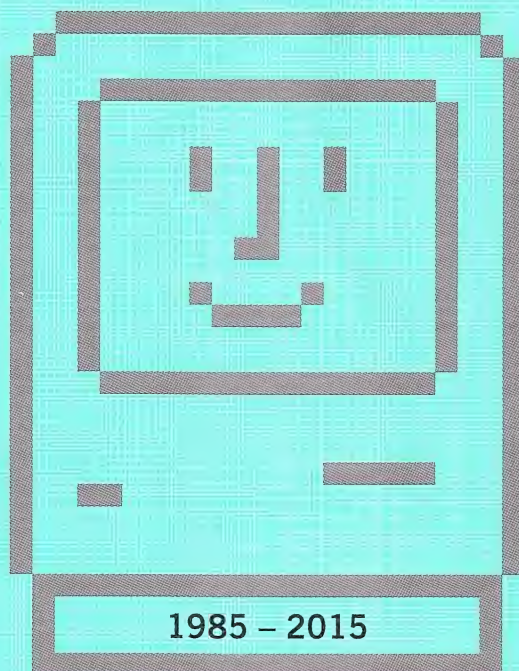
RETINA 5K iMAC REVIEWS

"THE BEST WAY I CAN DESCRIBE IT IS THIS: UNBOXING IT IS KIND OF LIKE SETTING UP YOUR FIRST HDTV. I DIDN'T WANT TO DO ANYTHING FOR THE FIRST FEW MINUTES; I JUST WANTED TO SWAP IN NEW DESKTOP BACKGROUNDS, EACH SHARPER THAN THE LAST, AND SEE HOW MANY DETAILS I COULD PICK OUT. EVEN THE FLAT NEW ICONS IN OS X YOSEMITE LOOK GREAT."

– Engadget's Dana Wollman.

"ALL OF THAT GREAT GEAR COMES IN A PACKAGE STARTING AT $2999, WHICH SHOULD PROBABLY BE THE MOST AMAZING THING ABOUT THE NEW RETINA iMAC. GIVEN THE BONKERS RESOLUTION, APPLE COULD HAVE PRICED THE THING INTO THE STRATOSPHERE, BUT INSTEAD IT'S FAIRLY REASONABLE."

– Gizmodo's Luke Hopewell.

"This screen packs in 218 pixels per inch — so tiny, so close together, that you can't distinguish them at normal viewing distance. (Frankly, I can't distinguish them right up close, either.) But pure quantity of pixels doesn't make anyone's life better unless they're good pixels. And on this iMac they are terrific pixels. This screen looks good from any angle. The glass is glossy, but not nearly as reflective as in the old days. Text is so sharp you could cut your finger on it."

– Yahoo! Tech's David Pogue.

"IN PERSON, THAT 5120 X 2880 DISPLAY IS SIMPLY STUNNING, ESPECIALLY WHEN DISPLAYING HIGH-RES FULL-SCREEN PHOTOS AND VIDEO. THE PREVIOUS 27IN iMAC HAD A 2560 X 1440 DISPLAY, MAKING THIS 2X JUMP ESPECIALLY IMPRESSIVE… THIS IS THE THIRD YEAR FOR THIS BODY SHAPE, AND THE DESIGN HAS MADE ITS WAY ALL THE WAY DOWN TO THE BASE 21.5IN iMAC (OR, AS WE CALL IT, THE iMAC AIR). STILL, IT REMAINS THE SHARPEST-LOOKING ALL-IN-ONE YOU CAN BUY, AND THE AMAZING 5K DISPLAY WILL LIKELY KEEP YOU SO MESMERISED YOU'LL HARDLY NOTICE ANYTHING ELSE ABOUT THE SYSTEM."

– Cnet's Dan Ackerman.

"GIVEN THE RETINA-TASTIC LINE-UP OF APPLE MOBILE PRODUCTS — FROM THE iPHONE 6 TO THE iPAD AIR TO THE RETINA MACBOOK PRO — IT ALWAYS SEEMED LIKE A MATTER OF TIME UNTIL RETINA DISPLAYS CAME TO THE DESKTOP. THAT DAY IS TODAY, AND THE iMAC WITH RETINA 5K DISPLAY IS JUST AS GOOD AS WE'D HOPED."

– Techradar's Matthew Bolton.

"AS A SIGN OF WHAT'S TO COME, THE RETINA iMAC IS ONE OF THE MOST EXCITING DESKTOP RELEASES IN A LONG TIME. TODAY, IT'S A SUPERB CHOICE FOR PHOTOGRAPHERS AND VIDEO EDITORS; TOMORROW, THE INEVITABLE DROP IN PRICE WILL MAKE THE iMAC A CLASS OF SYSTEM THAT WILL HAVE COMPETITORS SCRABBLING TO CATCH UP."

– Wired's Nate Lanxon.

"THE NEW iMAC'S PERFORMANCE IS IMPRESSIVE BEYOND JUST ITS ABILITY TO PUSH PIXELS – THOUGH THAT'S NOTHING TO SNEEZE AT. IN ITS BASE MODEL CONFIGURATION, THE iMAC WITH RETINA 5K DISPLAY COMES WITH A 1TB FUSION DRIVE AS THE STANDARD STORAGE OPTION, WHICH OFFERS A LOT OF PERFORMANCE ADVANTAGES OVER A TRADITIONAL SPINNING DISK HDD ON ITS OWN. THE 8GB OF RAM IS A DECENT STARTING POINT, AND THE 3.5GHZ QUAD-CORE INTEL CORE I5 CPU (WHICH HAS TURBO BOOST CAPABILITIES UP TO 3.9GHZ) AND AMD RADEO R9 M290X GRAPHICS PROCESSOR WILL GIVE MOST USERS AMPLE MUSCLE FOR EVEN COMPUTE-INTENSIVE TASKS LIKE 4K VIDEO EDITING."

– Techcrunch's Darrell Etherington.

"ALL THOSE PIXELS MAKE FOR A GREAT LOOKING DISPLAY, BUT THEY ALSO MAKE FOR AN INCREDIBLY USABLE DISPLAY, ESPECIALLY FOR PHOTO AND VIDEO EDITING. YOU CAN SEE UP TO 4K IMAGES AND FRAMES AT FULL SIZE AND STILL HAVE ROOM LEFT OVER FOR TOOLS AND PALETTES. AND ALL OF IT – EVERY STRING OF TEXT, EVERY BUTTON, EVERY PHOTO AND FRAME OF VIDEO – LOOKS PRETTY MUCH PERFECT. PART OF THAT IS THE DENSITY. PART OF IT IS THE QUALITY."

– iMore's Rene Ritchie and Peter Cohen.

"IT ONLY TOOK ABOUT 10 MINUTES OF USING APPLE'S NEW iMAC WITH RETINA DISPLAY TO MAKE ME WONDER HOW I'M EVER SUPPOSED TO GO BACK. BACK TO A WORLD WHERE PIXELS ARE VISIBLE ON ANY SCREEN, EVEN ONE THIS BIG. BACK TO ONLY HAVING ENOUGH SCREEN SPACE TO DO TWO THINGS AT A TIME. BACK TO DROPPED FRAMES, SPINNING WHEELS, AND WAITING FOR FILES TO COPY FROM ONE PLACE TO ANOTHER."

– The Verge's David Pierce.

"THE TECHNICAL ACHIEVEMENT OF THE RETINA iMAC IS IMMENSE. IT'S A FANTASTIC RESPONSE TO ANYONE QUESTIONING APPLE'S RECORD ON HARDWARE INNOVATION. THE FACT THAT APPLE WAS ABLE TO GET THIS TYPE OF SCREEN, WITH THIS QUALITY, WORKING THE WAY THAT IT HAS IN AN ALL-IN-ONE MACHINE IS INCREDIBLE. IT'S EVEN MORE IMPRESSIVE WHEN ONE REALISES THAT THE NEW SCREEN ACTUALLY USES LESS POWER THAN THE OLDER MODEL AND THAT IT WAS ABLE TO FIT EVERYTHING INTO A HOUSING THAT IS INCREDIBLY, INCREDIBLY THIN."

– Mashable's Christina Warren.

"For those with 2012 or 2013 non-Retina iMacs, our general recommendation would be to hold off on buying one of these. The screen is excellent, but not transformative – having sharper screens is great for phones and tablets that I hold close to my face, but I generally find that Retina in a laptop or desktop is a nice-to-have and not a need-to-have. Like the Retina MacBook Pros, the Retina iMac will likely get faster and come down in price as time goes on and high-resolution displays become the norm."

– Arstechnica's Andrew Cunningham.

LIFE IN THE CLOUD

Whether you're working on an urgent report or just sitting back playing your
favourite games, the future of computing lies in the cloud.
BY ADAM TURNER.

There was a time when all your precious data resided on a physical disc in your hand or else tucked away on your hard drive. These days it's more likely to reside in the 'cloud' – the trendy name for online servers hidden away in giant data centres.

The shift to the cloud has freed us from the shackles of the physical world – letting you access your digital belongings anywhere, anytime and on any device. It's also creating new business models and redefining the concept of ownership in the digital age.

Apple has gradually embraced the cloud, but it certainly isn't leading the way – Cupertino's approach to new areas is usually to sit back and see how a new technology pans out before jumping in with a slick offering. A look around the internet reveals a diverse range of online services that paint a broad picture of what the cloud may look like over the next few years.

STORAGE/BACKUP

There's no shortage of cloud storage services offering to look after your important files for a few dollars per month. The high-profile players are slowly becoming more generous and unlimited storage seems to be the way of the future.

Microsoft recently offered unlimited OneDrive storage to Office 365 subscribers and you'll get the same deal with a Google Apps Unlimited subscription. Others will also dangle the carrot of unlimited online storage as an incentive to sign up for various cloud services.

Cloud storage services are divided into two key categories – sync/share and backup – but they're converging to offer the convenience of an all-in-one cloud storage solution.

Sync and share-focused services like Dropbox and Google Drive are built around the idea of ensuring that your files are easily available from any device and can be shared with your friends and colleagues with a click. They provide a form of online backup, but it's not their primary focus. Their desktop backup software is still rudimentary compared to dedicated backup-focused services, which grant you much greater control over exactly what you back up and how often your backups run.

That said, backup-centric services like Mozy and Carbonite have been forced to add the ability to sync files between devices, in order to stave off competition from the likes of Dropbox, Apple, Google and OneDrive.

Jungle Disk is another backup service that has embraced the push for sync features and its alternative pricing model may offer a glimpse into the future. Rather than run its own data centre, Jungle Disk lets its users store their files in the enterprise-grade Rackspace and Amazon S3 data centres – charging a few cents per month per gigabyte of storage. Depending on what you're backing up and how many devices you need to protect, this can work out to be more cost-effective than some flat-rate storage services.

If you're using your online storage space as an archive rather than as emergency backup, Amazon Glacier becomes more attractive. It's much cheaper per gigabyte than Amazon S3, but the trade-off is that it takes much longer to recover your files. Amazon Glacier isn't practical for important data you need back in a hurry, in order to get up and running quickly after a disaster. It's more practical for large data sets such as your photo and home movie libraries, which you generally don't need to get back immediately as long as you know they're safe.

The other limiting factor with online storage services is the cost of mobile data. As this continues to fall, it will become practical for more people to back up photos and even videos to the cloud from their mobile devices while on the road.

OFFICE/COLLABORATION

The convenience of browser-based Office suites has been winning people away from traditional desktop software for several years. The future will bring tighter integration between online office suites and storage services, along with seamless transitioning between desktop, mobile and cloud apps.

Online storage king Dropbox recently signed an agreement with Microsoft to make it easy to edit Dropbox files via Microsoft's apps. Without this, Dropbox is in danger of being pushed aside in the race between Microsoft, Google, Apple and business-focused Box to offer a seamless online workspace. Meanwhile Google offers a Chrome extension that opens cloud documents using desktop apps.

Apple has also overhauled its cloud storage, but it's Microsoft that leads the way in terms of tight integration and cross-platform support.

Within Microsoft's Office 365 ecosystem you can create an Office file on your computer, save it in the OneDrive folder and automatically upload it to the cloud. The OneDrive folder integrates into the Finder and you can store any kind of file in there, knowing it will be automatically backed up online.

Alternatively, you can create an Office file online in OneDrive, and have a full copy automatically downloaded to a folder on your computer. Changes made to the file in the cloud are automatically downloaded, and you can collaborate

Movie tickets.pdf	document	11/7/2014 3:07 PM	
Recipes	folder	--	
Travel Guides	shared folder	--	Share ▾
Work schedule.xlsx	document	11/7	

Invite people to collaborate...
People can sync and edit

Send link...
People can view
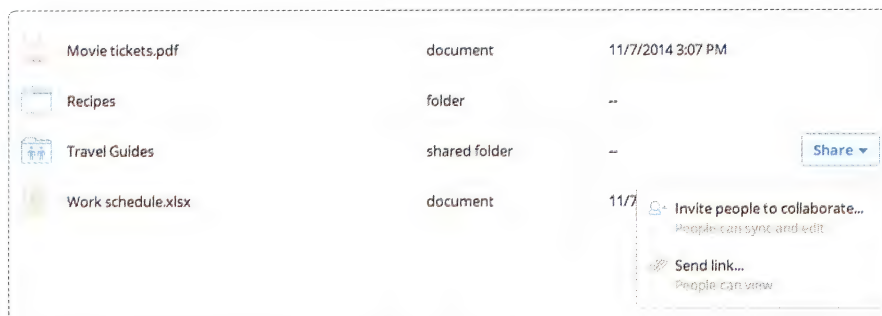
Pass it on. Dropbox makes it easy to share files with others.

Switch devices. Sync your documents across devices with OneDrive.

on documents in real time. Meanwhile changes to the file on your desktop are automatically uploaded – even changes made using non-Microsoft software like OpenOffice.

Microsoft also offers slick mobile Office apps for iOS, Android and Windows Phones. You can access any file from any device and there's no need to import, export or convert files so the formatting is preserved.

Neither Apple nor Google can completely match the flexibility of Microsoft's OneDrive. It's likely they never will because they're more interested in keeping you within their own ecosystem. Microsoft's strong Office 365 push is making the subscription service more attractive to Apple and Android users and it will be interesting to see if Apple and

Google concede and embrace the broader compatibility of Office 365.

The cloud giants will also take on key players in other areas, like the popular Evernote online notes service. Microsoft's OneNote has taken aim at Evernote this year, while there are plans to tightly integrate Google Keep into Google Drive. Apple's Notes app syncs with iCloud, but is rather basic in comparison – it's an area to keep an eye on.

Apple is innovating in other ways, with new features such as Handoff, which lets you pick up where you left off when switching between devices, and Continuity, which blurs the line between your Mac and your iPhone. With the growing focus on seamless mobility, you can expect Apple's competitors to be watching these features closely.

PHOTOS

It's easy to dump all your photos into any online storage service, but some are especially targeted at photographers and make it easy to access your favourite images from any device and share them with the world. They're likely to remain specialist services, with your average happy snapper either satisfied sharing their pics via Facebook and Instagram or else preferring the privacy of locking away their photos in closed services like iCloud Photo Library.

Photo-centric cloud services like Flickr and Photobucket rose to meet the needs of photographers and still tend to lead the big names in cloud storage when it comes to advanced photo-handling features. Google's Picasa photo editing software and tight integration with Picasa Web Albums is one of the best options you'll find from the major cloud players for maintaining a public photo gallery.

Dropbox has dipped its toe in the water with Carousel, but the other big names in cloud storage have a growing focus on privacy and closed galleries, catering to the backlash against Facebook-esque over-sharing.

There are two key aspects to working with images in the cloud. The first is uploading your photos and automatically syncing them across your various devices. The second is creating online galleries and sharing them strategically.

Apple has the first aspect covered with Photo Stream, which automatically uploads photos from your iGadgets to iCloud and syncs them to your other iGadgets, Macs, PCs and Apple TV. This isn't a true online backup service, as photos in My Photo Stream are only saved in iCloud for 30 days.

Photos on your iGadgets can also be backed up to iCloud, but this is where Apple's relatively expensive online storage can cause trouble. You only get 5GB of free iCloud storage with an Apple account and if your iGadget fills this with photos, then it stops backing up to iCloud completely. Now your other files are at risk because iOS is not smart enough to prioritise documents over photos even if

Apple's option. Apple's Handoff features, built into OS X Yosemite and iOS, enable users to continue working from a different device.
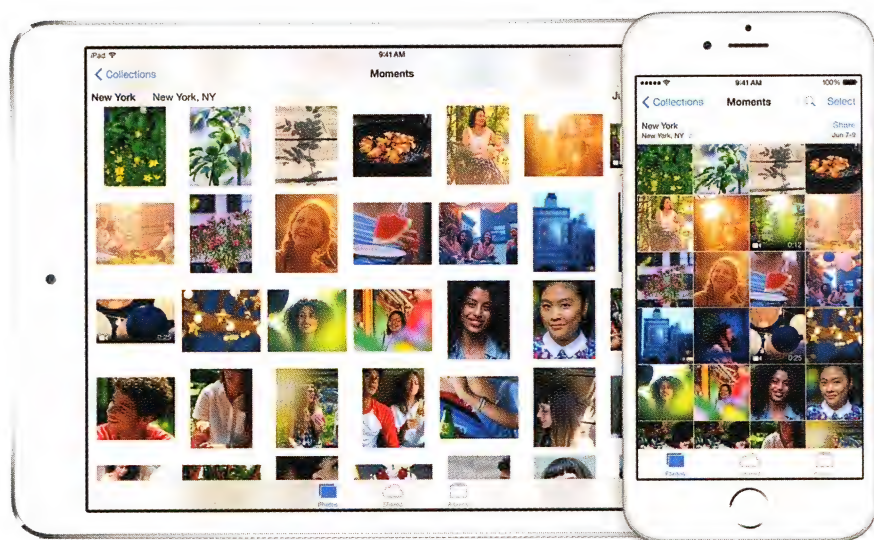
Library card. Still in beta form, iCloud Photo Library stores all photos and videos from your devices in one place.

Streaming subscription. For a monthly fee, Spotify lets users stream music from an extensive range.

there's some spare room in your iCloud account.

If you don't want to pay for extra iCloud storage, then an alternative is to disable iCloud photo backups and back them up elsewhere. Apart from your Mac, you may copy them to a Network Attached Storage drive using apps like PhotoSync and FileExplorer. Alternatively, apps like Google Drive, Dropbox, OneDrive and Amazon Cloud Services are designed to automatically upload your Camera Roll to the cloud, but they don't always run in the background as seamlessly as they should.

When it comes to creating private photo galleries, Apple is still finding its feet with iCloud Photo Library Beta. Apple has only recently added the ability to upload photos taken with other cameras and stored on your computer, rather than just photos taken with your iGadgets. This year should see the release of the Photos for Mac app, with native support for iCloud Photo Library, as iPhoto and Aperture are discontinued.

MUSIC

The cloud isn't just for storing and sharing your own content; it's also for tapping into a world of entertainment. The on-demand nature of the cloud has seen the rise of all-you-can-eat subscription music and video services – which seem to be the way of the future even if Apple is dragging its feet.

Subscription services are considered by many to be the content industry's best weapon against piracy. They were a long time coming, but Australia has finally seen an explosion of subscription music services, which put millions of tracks at your fingertips for around $10 per month. Options include Spotify, Rdio, Deezer, JB Hi-Fi NOW, Google Play Music All Access, Sony Music Unlimited and Xbox Music Pass.

Along with a large music library, you've also got the convenience of easily jumping between devices and resuming playback. Unfortunately, the vast music back catalogues still have gaping holes due to rights deals – some artists have flexed their muscles to keep their music off subscription services – but the situation is slowly improving.

Apple is the odd one out with the lack of a Spotify-style subscription music service, likely because it makes so much money from selling music. iTunes Match only lets you stream music that you already own. Meanwhile iTunes Radio is more like Pandora than Spotify, letting you create genre-based stations rather than listen to specific albums from start to end.

Apple has banished optical drives from Macs in an effort to nudge more people towards digital music downloads, but there's life left in music CDs for a few years yet. As Australian broadband gradually becomes faster, cheaper and more reliable, the eventual demise of the optical disc maybe well come at the hands of subscription streaming services like Spotify rather than download services like iTunes.
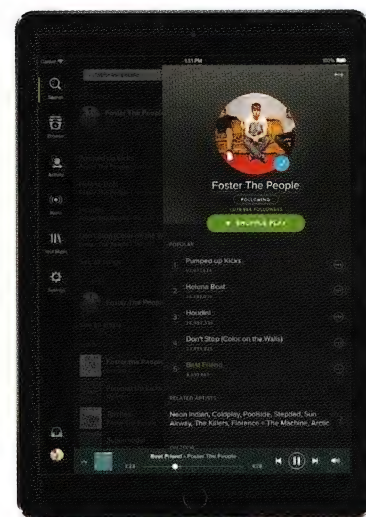
VIDEO

Subscription video is the next big frontier in Australia, with foreign giants like Netflix preparing to do battle with Quickflix, Foxtel and new players like Nine's Stan.

Just like their music equivalents, these subscription video services offer access to a vast library of movies and TV shows for around $10 per month. Unfortunately, the holes in the back catalogues are even more significant than the holes in the music libraries, partly due to rights deals and partly due to the delays between when content is first broadcast or shown in the cinema, when it goes on sale on disc or as digital download and when it is finally available via subscription services.

Netflix is the main player when it comes to subscription video – it's estimated that 200,000 Australians already sneak into the US service and it's officially launching in Australia in March. Apple is holding off on a subscription video service, but it isn't alone, other web giants like Google, Sony and Microsoft would also prefer to sell or rent you a movie rather than grant you access to a vast library for only a few dollars per month.

Australia's three major commercial television networks are all reportedly working on Netflix-style subscription video services. The Nine Network and Fairfax have already released details of Stan, which has secured the rights to *Breaking Bad* along with exclusive access to its upcoming spin-off *Better Call Saul*.

Coming soon. Video streaming service Netflix is set to arrive in Australia this year.

Local pay TV giant Foxtel is also ramping up its online efforts. It dropped the price of its Presto subscription movie service in 2014, along with the price of home Foxtel subscriptions. A similar price drop may come to the online Foxtel Play. At the very least, Foxtel is likely to offer discounts when the next series of *Game of Thrones* screens, in order to stave off illegal downloads.

Foxtel's exclusive deal with HBO denies Australian fans some legitimate ways to watch shows like *Game of Thrones*. Last season, Australian video services like iTunes, Google Play and Quickflix weren't permitted to sell even the first episode of *Game of Thrones* until Foxtel had screened the entire season. Google Play and Quickflix jumped in the next day, but Apple left *Game of Thrones* fans in the lurch for more than a month, because it didn't want to be dictated to by content providers. It was a bad outcome for viewers and certainly drove more Australians to piracy.

The next trend in cloud video services is likely to be content providers cutting out the middleman and going directly to the public. Disney and Warner have launched their own subscription video services and HBO has one planned for this year. Direct to the public services may sound like a good idea, but they run the risk of fragmenting the online video market and forcing people to subscribe to a dozen services to see everything that want.

At this point many will throw their hands up in despair and go back to BitTorrent.

GAMES

Of course, there's more to entertainment than movies and music.

Games have been sold as digital downloads for many years – there's the Steam platform, plus most games consoles also have their own online marketplace. The rise of smartphones and tablets has also seen Apple, Google and Microsoft start selling games. But games don't need to reside on your end device – it's an old concept, but it's about to take on a new dimension.

Multiplayer games have been hosted in the cloud for decades. Long before the rise of expansive online worlds like *World of Warcraft*, it was possible to run first-person shooters like *Counter-Strike* and *Quake* online rather than on your computer. These days, you can rent servers to host everything from *Call of Duty* to *Minecraft*, creating public or private games for your friends to join.

Most game hosting platforms charge a flat rate monthly subscription, but you'll find a handful that charge a few cents per hour based on the server resources you require. It's even possible to spin up your own virtual server in Amazon Web Services, host a game like *Minecraft* and then only launch the server when you need it – so you're only paying for the processing power.

The future of cloud gaming is rental models and streaming services, which

handle most of the grunt work in the cloud rather than on your end device. There are two key kinds of cloud gaming services – video streaming services and file streaming services.

Sony's PlayStation Now (formerly Gaikai) is a video game streaming service that is available in the US and may extend to Australia. It lets subscribers play PlayStation 3 games on a range of Sony devices including the handheld PlayStation Vita and new PlayStation TV set-top box. These devices aren't powerful enough on their own to run PlayStation 3 games; they rely on the cloud computing power of PlayStation Now.

In a similar fashion, it's also possible to stream games from a PlayStation 4 to a Vita or PlayStation TV around your home – letting you pause your game and resume it in another room when someone else needs to commandeer the big television in the lounge room.

Game file streaming services work in a different way. They actually download the game to the end device, but send it in pieces rather than as one large file. Enough code is sent to get you started playing, then the rest of the game is downloaded in the background – letting you get up and running quickly even if you're on a slow internet connection.

In the long-term, it's likely that cloud-based games will head in the same direction as movies and music, based on rentals and subscription services rather that outright purchases, although it's still early days.

COMPUTING COMES FULL CIRCLE

The early days of computing were based around the idea of a powerful central mainframe, doing all the thinking for dumb terminals that were little more than a monitor and keyboard. This all changed with the rise of the personal computer, putting processing power on every desk, but the push to the cloud is recentralising that power and taking care of the heavy lifting for our multitude of end devices. The result gives us the world on-demand – anywhere, at anytime and on any device. ◼

MAC GEMS
NEW SOFTWARE FROM THE MAC APP STORE

EXTENSIS SUITCASE FUSION 6
GRAPHICS & DESIGN
Extensis
US$119.95; US$59.95 (UPGRADE)

Suitcase Fusion 6 lets users organise their entire font collection, making it easy to find and preview fonts and create uniform designs across applications. In addition to creating font sets for projects, clients or any other organisational use, Suitcase Fusion lets you create Application Sets that open a group of fonts when a specific application launches. The Extensis font panel, which is automatically added to Adobe Photoshop, InDesign and Illustrator, allows you to explore and apply any of the fonts that Suitcase knows about, including your desktop fonts, Adobe's Typekit fonts, Google's free fonts and Extensis's own WebINK web fonts. The font management software's interface looks and feels similar to OS X Yosemite, with flatter-looking controls and fewer colour gradients or textures. It also provides full resolution on Apple's new Retina displays. Available via www.extensis.com.
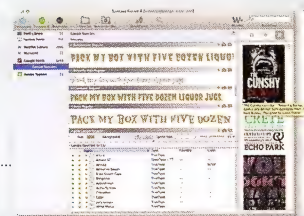
TOP PICK

AWAKEN
PRODUCTIVITY
Embraceware Software
$12.99

Billed as "the ultimate music alarm clock and sleep timer," Embraceware's Awaken helps you fall asleep – and wake up – to the sound of your favourite iTunes music. The app supports multiple alarms and timers, can be controlled via the keyboard and an Apple Remote, and even comes with its own set of soothing ambient sounds if music doesn't relax you quite enough.

MISCHIEF... SKETCH, CREATE, EXPLORE
GRAPHICS & DESIGN
Made With Mischief
$31.99

Made with Mischief's Mischief... Sketch, Create, Explore is a vector drawing app designed with sketching in mind. It provides infinite canvas space, implements a realistic stroke representation that gives drawings an organic feel, and even supports a variety of background paper textures and colours. Users can save six brush variants for quick access, infinitely undo and redo and export designs in JPEG, PNG or PSD formats.

PINGBAR
PRODUCTIVITY
Maximilian Heim
$1.29
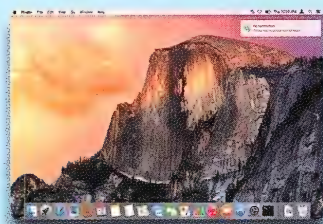
If you occasionally feel like connecting your Mac to a Wi-Fi network is more like playing the lottery than using technology, Pingbar can help you figure out if anything is wrong with the internet. The app allows you to periodically verify that a specific website is reachable, and advises you when it can no longer connect to it and when a connection is once again available.

SMARTPLAYER
VIDEO
Alexander James
$6.49
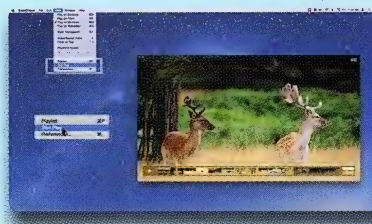
SmartPlayer offers a few unique tools for those who like to watch videos without getting distracted from their busy day. The app allows you to quickly create playlists by dropping files on its icon, can play a video on the desktop or in a dedicated mini-view, and will even play in a semi-transparent window that sits on top of your other content.

DELTACAD
GRAPHICS & DESIGN
Midnight Software
$49.99
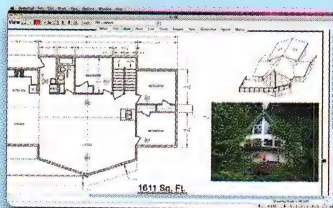
Midnight Software's DeltaCad is an inexpensive but feature-packed design software that lets you create highly precise technical drawings for everything from mechanical parts to your next dwelling. The app is simple and intuitive to use, supports the most common CAD file formats and even allows you to create bill-of-material reports based on the objects you use in your designs.

MONOSNAP
GRAPHICS & DESIGN
Farminers
FREE
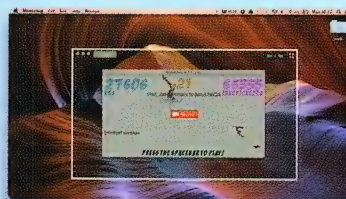
If you're working on a presentation – or just trying to explain to your relatives how to set up their Wi-Fi for the tenth time – Farminers' free Monosnap is a handy tool that makes taking screenshots and short screen recordings a snap. The app supports a variety of annotation options like highlighting, blurring and so forth, and can even export data to external services via a $6.49 in-app purchase.

VISUAL BUDGET: EXPENSE TRACKING AND BUDGET MANAGEMENT
FINANCE
Kiwi Objects $12.99
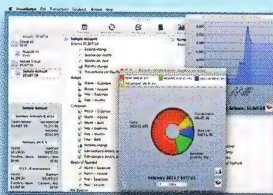
Kiwi Objects' Visual Budget: Expense Tracking and Budget Management tracks your expenses and helps you stick to a budget for both personal and business purposes. The app allows you to quickly and efficiently divide your expenses by category, can produce great-looking charts that give you a visual indication of where your hard-earned money is going and even comes with built-in support for recurring transactions.

AVOID: SENSORY OVERLOAD
GAMES
48h Studio
$4.99

48h Studio's *Avoid: Sensory Overload* will keep you entertained during your downtime with a simple but highly entertaining game in which your own objective is to avoid falling into the void of space. Fast-paced and very colourful, the game is simple to understand but hard to master, and delivers endless fun for a price that's hard to beat.

ADOBE PREMIERE ELEMENTS 13
VIDEO
Adobe
$99.99

TOP PICK
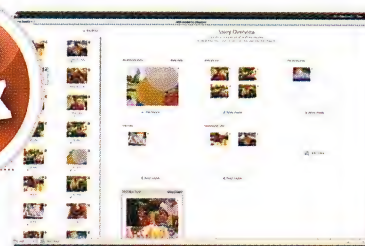
Premiere Elements 13 delivers a one-two punch for videomakers looking for ever faster ways to spice up home movies with Favorite Moments and Video Story. Perfectly suited to the kind of overly long clips we all tend to shoot while on vacation or family events, Favorite Moments allows you to play a single clip while marking only the moments actually worth using. Video Story makes it easy to encapsulate life events into polished movies, complete with titles and music to suit the most common occasions. After selecting photos or videos to import, PE13 presents a storyboard broken into different chapters, and you drag and drop to add your content. Premiere Elements 13 then takes over, selecting the best parts of each clip, and then adding transitions and music to suit the desired mood. Available via www.adobe.com/au.

Say hi. Evernote's Hello adds the contact record to your address book with a quick picture.

FIVE WAYS TO REDUCE YOUR PAPER WORKLOAD

BY ANTHONY CARUANA

It's a fair bet that somewhere in your office there are boxes or folders of documents that you keep either because of some regulatory requirement or 'just in case'. Those bits of paper take up valuable storage space and represent a risk to your business.

If they're lost, you may find it hard to comply with a direction from the tax office or some other authority to produce information. Or, if the worst happens and there's a fire in the office, you're storing lots of fuel.

So, how can we reduce the amount of paper you store and deal with?

1. PREVIEW
The Preview application has been part of OS X since the days of NeXTSTEP – the operating system that the Mac OS X evolved from.

While you probably use it for viewing PDFs and other files, you may not be familiar with its editing capabilities.

If you receive a document, you can annotate and edit it using Preview's tools. There's even a tool for adding your electronic signature.

What that means is that when you receive an electronic document, you can sign and date it, save it and email it off without having to print anything. That saves you paper, ink, time and storage space in the office.

2. HELLO
There are dozens of business card scanners out there, but Hello has become our favourite.

Hello is part of the Evernote family of programs. It's an iPhone app that takes photos of business cards, recognises the text within them and then adds the contact record to your address book.

It even searches for the contact on LinkedIn and lets you connect as well as emailing your contact details to your new acquaintance.

All the cards and data is stored within Evernote so you can access the cards from that application as well.

3. SCANSNAP
ScanSnap is both a software and hardware solution. Fujitsu's ScanSnap scanners have developed an excellent reputation. They can scan double sided documents in seconds, sending the content either to your file system, email or into Evernote for storage.

We've been using a ScanSnap scanner for some time now. Scanning and saving documents takes but a few seconds and, as we have an Evernote Premium account, all the scanned files undergo automatic text recognition so that they can be full text searched.

The end result – we haven't stored a single scrap of paper for months.

4. EMAIL AND PDFS
In theory, the advent of email should have resulted in a reduction in the amount of paper we use. But that's not been the case.

If you want to reduce the amount of paper flowing through your office, start by reducing the amount you produce. When you create a document or spreadsheet that will be shared, use the Print command and choose the 'Email PDF' option.

That will ensure that the file you send will retain its layout and integrity.

5. EQUIP YOUR TEAM
If you want to reduce the amount of paper being used in the office, equip your team with large screens that make it easy to read and edit documents on screen so there's no

need to print. Also, educate your teams in the use of the reviewing tools that are part of all commercial office applications these days and acquaint yourself with cloud-based collaboration systems such as Office 365, Google Docs and iCloud so that teams can work on files collaboratively without the need for lots of paper copies.

It's not that hard to reduce your dependence on paper. With a little planning and small investment, you can make the shift to paperless without compromising productivity.

DATA SECURITY PITFALLS – FIVE THINGS YOU NEED TO KNOW

BY ANTHONY CARUANA

Over the last couple of years, the IT security landscape has changed in some very significant ways. Criminal gangs and nation states are now responsible for many security breaches and the resources available to malware architects are very sophisticated and easy to use. Before 2012, there were no mega-data breaches, where more than 20 million data records were stolen at one time. Today, such thefts are commonplace.

So, what can your business do about it?

1. PASSWORDS
Strong passwords is an important first line of defence in your data security. Make sure that your passwords aren't easily guessed – don't use words from the dictionary or anything that can be easily guessed. Mix up the use of numbers, upper and lower case letters and symbols so that your password isn't easily predicted.

Recent versions of OS X will create characters made up of random characters and store them for you in the iCloud Keychain so that you can securely share them across your devices.

This will ensure that your passwords are hard to guess and that you have a

different password for each different service you access. That means that if one service is breached and your password is compromised you don't run the risk of the same password being used to access all your other online services.

2. TWO-FACTOR AUTHENTICATION
Many banks and other institutions that are concerned with security now use two-factor authentication. This is where you need to provide the system with two pieces of information in order to gain access. The password works through something you know and something you have.

For example, Apple offers two-factor authentication of iCloud. Once you go through the validation process, access to iCloud is locked to devices where the user has the password and the actual device is authorised.

If you decide to access iCloud from another device, you'll need to authorise that device via a PIN that is sent to your mobile phone or another device you authorised previously.

3. THINK ABOUT ABOUT WHERE YOU STORE DATA
Cloud storage services are very popular but we'd suggest that when you consider a cloud service you substitute the word 'cloud' with 'someone else's computer'.

If you plan to use online services to store your data, do some research and look into where the data is actually stored,

what guarantees are given with regards to security and backups and how you can take your own backups of data stored there.

With local storage such as USB drives and network attached drives, while it's tempting to buy the cheapest drives on the market, it's important to do your research. Look into reliability reports – there's little point saving $20 on a hard drive if it fails after a year, taking your precious data with it.

Also, be careful with portable storage devices. The Australian Army was embarrassed some years ago when a USB stick with sensitive information was accidentally left at an airport lounge.

4. BACKUPS
The only time people get serious about backups is after they've suffered a disaster. Securing your data means taking regular backups, storing those backups away from the office and regularly testing your backups to ensure that the data they hold can be easily retrieved.

5. LIMIT ACCESS
The best way to stop data from getting in the wrong hands is to protect it from the outset. As your business grows and you add staff, it will become increasingly important to plan your systems so access to data is limited only to those that need it. This ensures that only the correctly trained and authorised personnel can see and change data.

GET YOUR WEBSITE MULTI-SCREEN READY

BY ANTHONY CARUANA

Back in the old days, when you created your company's website you only had to really worry about making it work on a desktop or laptop computer. In most cases, the biggest decision was how wide to make the page in order to accommodate the limited screen resolutions of the time.

Today, your website needs to be multi-device ready. Think about it. Don't you get frustrated when you visit a website only to find it's completely dependent on Flash so you can't read it on your iPhone or iPad? Or, when you go to the site, it's all designed for a desktop browser, so it's impossible to read or the menu options are hard to find and tap?

Your potential customers will be coming to your website using a multitude of different devices. They may have a laptop for work, a desktop at home, a tablet for when they're sitting on the couch and a smartphone when they're travelling. That presents website developers with a challenge – how do you make a website that looks great and is functional on every different device?

The good news is that it's relatively easy to direct customers to different versions of your website based on the device they are using. That way they get the best possible experience whether they're on a computer, tablet or smartphone.

What you need to realise is that your website's content is completely separate from the look and feel. On modern websites the content is separated from how it's presented. All of your page content, images and blog posts are stored in a database. When someone visits your website, the content they want is pulled out of the database and fed into a template that defines the appearance.

That means you can customise how the data is presented on different sized screens. You may choose to offer different functions for customers on different devices.

When a web browser visits your site, it actually tells the site what web browser you're using and, potentially, what device you are using. Web developers can use that information to dynamically tailor the appearance of your website to suit the device.

This doesn't always need a software developer. For example, you could build an attractive and functional website using open source applications such as WordPress (wordpress.org), and something like TomatoCart (www.tomatocart.com) for your shopping cart solution. Each of these offers the ability to tailor the look and feel depending on the device that is used to access your site.

With WordPress, you can use a plug-in that will detect what browser your visitor is using and then reformat the page so your content is displayed appropriately.

You may even choose to only show certain content when users come to your site with particular devices. For example, you may choose to not show high-resolution videos or images to mobile users.

Our advice is to think like your customers. Are they likely to be using the same computers, mobile devices and browsers as you? Once you've developed the multi-screen version of your website, test it thoroughly. If you don't have access to lots of different devices, ask some friends and family to visit the test site before making it live so that you get lots of feedback from people using different devices.

VIDEO-CONFERENCING AND THE PATH TO UNIFIED COMMUNICATIONS AND COLLABORATION

BY ANTHONY CARUANA

Between Skype, FaceTime and lots of other video-conferencing tools, you'd think we'd be living like *The Jetsons* or the crew of the Enterprise, quickly starting a video call whenever we wanted to chat with someone. And while it's true that the hardware, software and bandwidth are all there, video-conferencing is still seen as a second or third choice, behind the phone or face-to-face meetings when it comes to business communications.

Communication isn't just about the words we use. Our gestures and how we move our body when we talk, speak volumes. There are sciences such as neurolinguistics that analyse and quantify the importance of our entire physiology in how we communicate and react.

When we make a phone call, the person on the other end of the line doesn't just respond based on our words. They hear our tone, recognise sarcasm and pick up many unspoken elements of our communication.

Video conferencing takes that a step further. In addition to the audio, people see each other. So, while on a phone call you can sit back and relax, perhaps even multi-task and check a few emails on your laptop or tablet while on the phone, video-conferencing directs both parties to be more attentive. It creates a far more personal and rich connection between parties in conversation.

If you're a frequent traveller, the ability to make a video call is a great way to keep in touch with the office and family. One of the things I do when I'm travelling is use my smartphone or tablet to take my family on a tour of my hotel room and the nearby facilities. Although it's not the same as being there, they can get a feel for where I am. I can also look at my children's homework and continue to participate in their life in an, albeit, limited way.

In business, we've all become dependent on the phone and email. Those media are critical but they do have limitations. With email, many of the nuances we have in conversation are missed. For example, it's not easy to convey sarcasm or humour over email. Similarly, with telephones we can't convey facial expressions.

Video-conferencing overcomes these challenges. All the people on the call – most video-conferencing systems allow you to have several parties on the line at the same time – can see each other. If you're a manager, it also helps to know who is actually paying attention during remotely conducted team meetings.

BEYOND VIDEO

Once you get your staff engaged with video-conferencing, you can move on to the next stage – unified communications and collaboration. This is where people can see each other, talk to each other and collaborate using desktop sharing apps, instant messaging and other tools.

Think of it like this. You are part of a team of people working on a report. There's a document and spreadsheet you're all working with as well as a presentation to create that supports the report. With the right tools, the team members can work together on the files, see each other so they can discuss the work and bring in other experts, when they're needed, using instant messaging or some sort of telepresence tool that tells them who is available.

That sort of collaborative environment doesn't need everyone to hop on a plane. By having a solid toolkit that includes video, audio, collaboration and other tools, it's possible to save on travel costs and bring remote teams together.

FileMaker An Apple Subsidiary

PROUDLY SUPPORTING MAC IN BUSINESS

APP GUIDE
Cool software for the iPad, iPhone & iPod touch.

PIXELMATOR
PHOTO & VIDEO
Pixelmator Team
iPAD $6.49

TOP PICK

From cropping and straightening to colour correcting, retouching and painting; from creating selections to combining imagery; from blending layers to adding slick effects, shapes, layer styles and highly customisable text, Pixelmator for iPad truly does it all… for a mere $6.49. The whole program is layer-based (think stackable transparencies) so you can resize, reposition, retouch, paint or add an effect to something on one layer without affecting the content of other layers. This makes for an extremely forgiving editing environment that gives you truly creative compositing and photo painting or tracing opportunities. All files can be saved to iCloud Drive or your Photo Library and can easily be read using Pixelmator 3.3 for the Mac. You'd be hard pressed to find a more powerful iPad image-editing app than Pixelmator for iPad.

OMNIFOCUS 2 FOR iPAD
PRODUCTIVITY
The Omni Group
iPAD $37.99
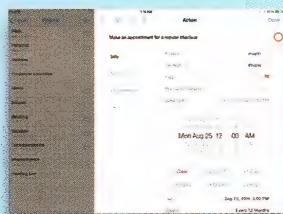
If you need more power for sub-tasks, contexts and weekly reviews than your typical to-do list provides, you can't go wrong with OmniFocus. Despite being much simpler to use, it still takes a certain investment in learning to use it. But if your life is sufficiently complex, the time you spend figuring out how to best use OmniFocus will be time well spent.

RETRY
GAMES
Rovio
iPHONE & iPAD FREE

Retry is a maddening retro-styled side-scroller from juggernaut mobile developer Rovio. Though the art is rendered in eight-bit retro graphics, the entire package is much more than a cheap cash-in. With four worlds to explore, power-ups, a memorable chiptunes soundtrack and a maddeningly difficult gameplay of its own, *Retry* earns its place on the App Store's must-play list.

THE SILENT AGE
GAMES
House of Fire
iPHONE & iPAD FREE
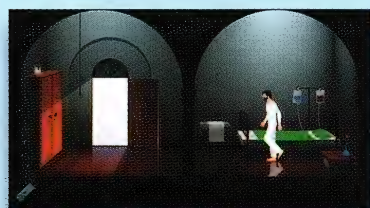
The Silent Age is a two-part, point-and-tap adventure game that takes place in two different eras – your character's present-day 1972 and a 40-year leap to the post-apocalyptic 2012. Each episode is divided into five chapters, and the writers do a great job of keeping you interested and on your toes throughout the entire storyline. Part two is a $6.49 in-app purchase.

CODE SCHOOL
EDUCATION
Code School
iPHONE & iPAD FREE

Ready to learn? Code School's app for iOS lets users watch hundreds of videos for more than 40 courses, teaching topics such as JavaScript, HTML/CSS, Ruby and Rails, Git and iOS. You can stream or downloaded videos for offline use and many courses offer free first levels so users can preview content. You'll need to be a US$29-a-month enrollee to take advantage of all this education, however.

SLEEP BETTER
HEALTH & FITNESS
Runtastic
iPHONE FREE
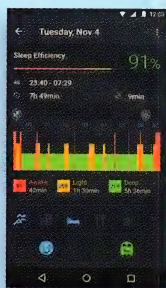
This is a free iPhone app from the makers of the Runtastic fitness app. It helps users track their sleep, monitor moon phases and keep a dream diary all in the service of helping you understand your sleep habits. Just place your iPhone on the bed, fire up the app and sleep like a baby.

TINTYPE
PHOTO & VIDEO
Hipstamatic
iPHONE $1.29

Someday soon, we'll start seeing apps that convert pictures into old cave paintings. Until then, your old-timey picture needs may best be served by TinType, an iPhone app from Hipstamatic that tries to replicate the look of daguerrotypes, tintypes and other forms of photography that were already out-of-date when your grandparents were born.

KEEZY DRUMMER
MUSIC
Elepath
iPHONE & iPAD FREE
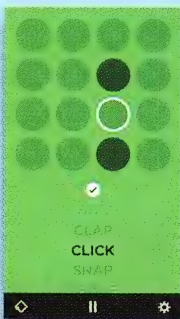
Keezy Drummer bills itself as "the easiest programmable drum machine ever made". The free iPhone and iPad app features 12 percussion sounds; up to nine can be layered into one track to make a complex beat. Set the tempo between 0 and 300 beats-per-minute, then let it go. Beats can be streamed via AirPlay Mirroring.

CLOTH
LIFESTYLE
Clothes Minded
iPHONE FREE
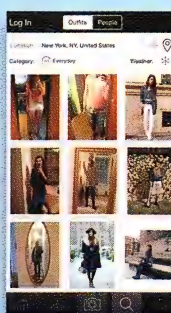
Instead of cluttering up your Camera Roll with wardrobe shots, Cloth centralises your photos in one spot and let you tag outfits by occasion. In its latest incarnation, Cloth is focusing on social. You can comb through stylish people's photos around the world, filtering by clothing item, weather or category (work, evening, vacation, etc). In-app messaging lets you share outfits with your friends and get their feedback.

MONUMENT VALLEY: FORGOTTEN SHORES
GAMES
UsTwo
iPHONE & iPAD $4.99 (PLUS $2.49 IN-APP PURCHASE)

Monument Valley, the visually stunning perception puzzle that has players work their way through an MC Escher-inspired landscape, is easily one of the best mobile games of 2014 – perhaps ever. *Forgotten Shores* costs $2.49 and offers eight additional complex levels to explore, with Ida, the 'silent princess,' as your main character. It's clearly designed to appeal to *Monument Valley* veterans; familiar game mechanics remain, but new mechanics are introduced and puzzles require more brainpower to solve. If you've played *Monument Valley*, you have to play *Forgotten Shores*. The additional levels are multi-parted and have more complicated puzzles than you saw in the first game, and the entire expansion will give you around two hours' worth of casual playtime.

TOP PICK

Belkin QODE Slim Style Keyboard Case for iPad Air 2

The QODE Slim Style comes with a built-in wireless Bluetooth keyboard for all your typing needs. Thin and lightweight, the case features a magnetic closure, doubles as a viewing and typing stand in landscape orientation and provides easy access to the Lightning port and camera. According to the manufacturer, a single charge of the keyboard's battery will last for about six months' worth of use.

Belkin / $129.95 / www.belkin.com/au

GEAR GIZMOS GOODIES

GADGETGUIDE

Sena Heritage UltraSlim

The Heritage UltraSlim is a hand-crafted full-grain leather pouch that offers lightweight protection for your iPhone 5/5s/6 while you're on the go. The pouch features a printed microsuede lining to prevent scratches or damage to your screen, comes in cognac, denim, black or sage, and is designed to acquire a unique look as the leather naturally ages.

Sena
US$39.95 + shipping
www.senacases.com

Logitech Keys-To-Go

The Logitech Keys-To-Go Bluetooth keyboard is somewhat reminiscent of the keyboard that accompanies every Microsoft Surface tablet – it's lightweight, slender and covered with FabricSkin, a spill-resistant material that's easily cleaned. Weighing 180g and measuring 13.7 x 24.2 x 0.6cm, the keyboard comes in black, red and teal and is powered by a rechargeable three-month battery with a battery check indicator light.

Logitech
$79.95
www.logitech.com/en-au

PowerSkin PoP'n 2

The PowerSkin PoP'n 2 claims to be the first external battery designed for the iPhone 6 and iPhone 6 Plus. It suctions onto the back of the phone to help the devices work in tandem, then detaches for later use. The battery pack has a 4000 mAh capacity, weighs 118g and measures 11.4 x 5.8 x 1cm.

PowerSkin
US$79.99 + shipping
www.power-skin.com

Kenu Stance

The Kenu Stance is a portable tripod that plugs directly into the Lightning port of later-model iPhones, and the base can extend to display it in portrait mode or collapse to become a lean-to for landscape viewing. It includes a cable adapter to keep things tidy while charging – and if nothing else the Stance makes a handy bottle opener.

Kenu
US$29.95 + shipping
www.kenu.com

Griffin Technology CinemaSeat for iPad Air and iPad Air 2

The CinemaSeat turns your tablet into a veritable in-car entertainment system. The case features an adjustable strap that allows you to secure it around your headrest, a padded frame for extra peace of mind and a pocket at the back to store your charging cable and earphones.

Griffin Technology
US$39.99 + shipping
griffintechnology.com

Just Mobile Xtand Go Z1

The Just Mobile Xtand Go Z1 is an in-car mount for your iPhone. Its suction base lets you mount it just about anywhere for best hands-free viewing – on the dash or even hanging from the windshield. It can hold your smartphone with or without its case. The Just Mobile mount can rotate 360 degrees and expand to 9cm wide.

Just Mobile
US$34.95 + shipping
www.just-mobile.com

Photojojo Touch Tonic

Gloves with fingertips made to interact with iOS touchscreens have been around forever, but they can't replace your favourite, stylish gloves. Why not give them an upgrade? Tonic Touch is a US$20 kit that lets you convert your old-school analogue gloves into digital marvels ready to play with any touchscreen you have available.

Photojojo / **US$20 + shipping** / www.photojojo.com

GET TO KNOW iOS 8

Unlock the new features in Apple's latest mobile operating system.

Illustration by Harry Campbell

iOS 8 doesn't radically change the look and feel of your iPhone and iPad, like iOS 7 did. A lot of the improvements in iOS 8 are aimed at developers, who can now trick out their apps with support for Touch ID, extensions, widgets and HealthKit. But there are still plenty of goodies for users like us, too.

CHANGES IN THE SETTINGS APP

BY SERENITY CALDWELL & LEAH YAMSHON.

With every new version of iOS, Apple loves to add, tweak and change settings; unsurprisingly, iOS 8 is no different. Here's a comprehensive list of just about everything the company has changed in iOS 8 within the Settings app.

MOBILE

The Mobile section used to be hidden in iOS' General section in previous versions, but was moved to the main screen of the Settings app in iOS 7. It remains there in iOS 8, and for the most part remains unchanged – Mobile features toggles for Mobile Data, LTE and Data Roaming, along with the menu for using your iPhone as a Personal Hotspot (which, oddly enough, also gets its own listing on the main screen).

Organise it. Settings is one of the most overlooked yet important apps in iOS 8.
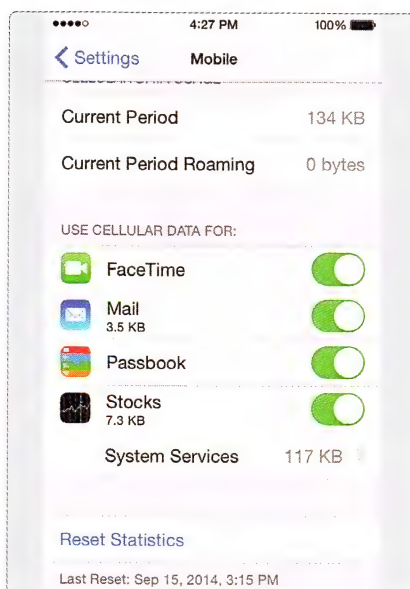
Halt roaming. Tap an app's toggle to restrict the app to downloading data via Wi-Fi.

If you have a sharp eye, you'll notice that the layout of these toggles has changed ever so slightly: Mobile Data and Enable LTE are now stacked directly on top of each other with a shared caption about usage. They used to each have their own caption.

Scrolling down, you'll find info on your Call Time, broken down by Current Period and the total Lifetime of your iPhone. Your iPhone doesn't automatically start these new data periods – if you'd like to track a specific time period, scroll all the way down and tap Reset Statistics to start the count from zero. This won't affect the Lifetime count. Keep an eye on this section to avoid going over your monthly allotment of mobile call minutes (if your plan has restrictions, of course).

You'll also find info on your overall and roaming mobile-data usage, combining uploads and downloads into one usage stat. This is split into Current Period (which is again tied to the time period you set with Reset Statistics) and Current Period Roaming. Roaming usage is very handy for travellers with a data limit, as it lets you easily keep an eye on how much data you're using and scale back if necessary.

See that long list of apps in the next section? Those are all of the apps on your iPhone that use mobile data – all apps use mobile by default, but you can tap the toggle next to an app's name to restrict

it to Wi-Fi downloading. This will help tremendously if you're trying to watch your data usage.

Finally, at the very bottom of the screen, you'll see a listing for System Services; tap it to see all of the services that use data, and how much data each is using. Uninstalled Apps shows how much data any apps you've recently uninstalled used during the current period before you gave them the axe.

NOTIFICATIONS

This section controls how your iPhone will receive notifications from other apps, and how they'll appear in your personal Notification Center – the info panel that appears when you swipe down from the top of your device's screen. As far as settings go, we've gone there and back again with Notifications and how it's listed. When iOS 7 launched, the Notifications section got a new name – Notification Center – but has now gone back to plain Notifications with iOS 8. (It's probably more fitting, as you monitor all of your notifications here, not just what is displayed in your Notification Center.)

If you're migrating from iOS 7, you'll find that most of the same commands are here, but they're laid out slightly differently. Right away, you'll notice that the Today View section is gone, which indicated what you'd see in Notification Center's Today tab. Instead, you can find those controls directly within Notification Center – just tap the Edit button at the bottom of your Today tab.

Back to Notifications. You'll start by selecting how to sort your notifications, either manually or by time; tap your preferred view to select it.

FAMILY SHARING IS A NEW iOS 8 FEATURE, AND IT ALLOWS YOU TO REGISTER UP TO SIX APPLE IDS TO ONE 'FAMILY'.

You'll then see two lists of apps: Include and Do Not Include. Include contains each app on your iPhone that has some kind of notification enabled; tap each app individually to control how that notification will be presented. And there is a lot you can control, starting with whether or not you even want to receive a push notification from this app – toggle it off if you don't. Next, pick how many recent items from this app you'd like to see in your Notification Center; tap the listing to pick between none, one, five and ten. Select what sound you'd like, whether you want a badge with the app's icon to appear, and if you'd like notifications for this app to pop up on your lock screen.

Finally, select an alert style: None, Banners (a bar across the top of your screen that pops down when you get an incoming notification) or Alerts (which pop up on the centre of your screen).

Depending on the app, you may have a few more options. Calendar, for example, lets you set individual notification commands based on the incoming info – it's split by upcoming events, invitations, invitee responses and shared calendar changes.

Yes, it's a bit annoying to have to change your Notification settings one app at a time, but the amount of control really lets you customise your app experience.
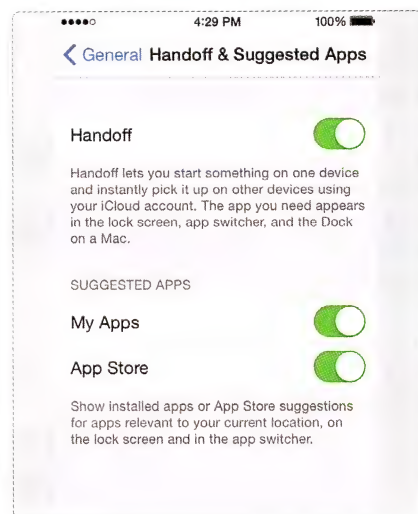
Handy. Handoff uses Yosemite's Continuity, and Suggested Apps offers app suggestions based on your location.
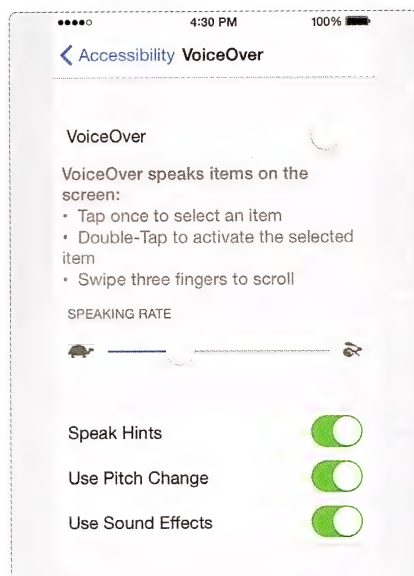
Accessible. Subtle tweaks were made to the VoiceOver controls and you'll notice changes to iOS 8's Accessibility options.

For all you iOS veterans, all of that is old news – just laid out a bit differently. One new feature you'll find in Notifications is a control for Family Sharing. Family Sharing is a new iOS 8 feature, and it allows you to register up to six Apple IDs to one 'family'. Family members can then share app and media purchases across devices, have access to a shared family photo album and calendar, and much more. Here, you can set specific notification types for members within your Family Sharing account.

Apple introduced a brand new app for iOS 8 called Tips, which gives you a weekly tip to teach you more about your iPhone and iOS 8. You'll have the option to control Tips' notifications here, too.

GENERAL

Your catch-all General settings have largely gone unchanged, save for a few rearrangements and one new addition.

About. The only change in the About section is the removal of the Diagnostics and Usage item.

Siri. Siri can now respond to your cry of "Hey Siri" when your iPhone is connected to a power source – just toggle on Allow "Hey Siri" to try this out. This has replaced the Raise to Speak option from iOS 7.

Spotlight search. iOS 8 introduces two additional categories that can be included

in Spotlight Search, which you access by swiping down on the screen. Spotlight Search now digs up Spotlight Suggestions and Bing Web Results. Warning: you may want to check out the Spotlight Suggestions and Privacy disclaimer at the bottom.

Handoff and Suggested Apps. This is a new section for two new features. Handoff lets you start something on one device and pick it up on another device, linked together by iCloud. Of course, there are some caveats: mobile devices must be running iOS 8, and your Mac must be running OS X Yosemite. This is part of Apple's Continuity plan that allows users to respond to calls and SMSs on a Mac and quickly connect to a personal hotspot.

As for Suggested Apps, this feature will recommend apps for you to use depending on your current location and display them on your lock screen. Toggle on My Apps to get suggestions on apps you already have installed. Toggle on App Store for recommendations for apps you don't own, but that your iPhone thinks will be useful.

Accessibility. This section has actually changed quite a bit, offering a wider range of options for those who need assistance. Options are broken down into different categories, starting with Vision.

To start, the Text Size controls have been folded into Accessibility; you'll find them by tapping Larger Text, and then use the scroll panel to set the size.

You'll also notice a new toggle for Greyscale, and a new category for Speech controls, with toggles for Speak Selection, Speak Screen and Speak Auto-text (which used to be found on the main Accessibility screen, but have now been condensed).

VoiceOver has a few tweaks, including updates to the adorable tortoise and hare icons on the Speaking Rate control slider. Where the Use Compact Voice toggle once was, you'll find an option for Speech, where you can select your dialect based on your language (which used to be a standalone Accessibility control) and add a rotor language. Braille has a couple of more in-depth options, including the

braille display's output and input types (six-dot, eight-dot or contracted), and a toggle to turn pages when panning. Rotor has two new additions: Audio Ducking and Braille Screen Input. Another new control is Typing Style; iOS 8 supports Standard Typing, Touch Typing or Direct Touch Typing.

Zoom houses your controls for magnifying the entire screen, and has a few more options in iOS 8. You'll find toggles for Follow Focus, Zoom Keyboard and Show Controller, which reminds you of your zoom gesture controls in case you need a reminder. You can also set your Zoom Region (either Window Zoom or Full Screen Zoom) and select your maximum zoom level.

When looking at the Hearing assistance options, you'll notice that the Subtitles and Captioning controls have moved to a new category – Media, which also offers an option for Video Descriptions.

The Physical and Motor category found in iOS 7 has been renamed as Interaction in iOS 8; within this category, the Incoming Calls function has been renamed to Call Audio Routing.

Usage. Usage now provides a deeper a look at what apps are draining your precious battery life, which you can find by tapping Battery Usage. It shows what apps you've been using for the past three hours and the proportion of battery used by each app. Pretty nifty if you're trying to find the worse battery offenders to kill in a pinch.

Auto-lock. You can now select 'Never' as an auto-lock option.

Restrictions. Privacy buffs will surely appreciate iOS 8's new restriction on location sharing – tap Share My Location to turn this restriction on. In turn, Find My Friends has been removed as a restriction option.

Language and Region. Formerly known as International, Language & Region is where you'll select your iPhone's language and select your region formats. A few

things have been shuffled around in this section – there are no longer controls for keyboards and voice control here, for example, though you can easily find them in other settings controls (keyboards is on the main General page). You'll also find an Advanced option that will automatically reformat dates, times and numbers to be the same as the primary language.

DISPLAY AND BRIGHTNESS
Formerly Wallpapers and Brightness, this setting gets a new name, icon and moves wallpaper picking into its own section. iOS 7's dynamic Text Size picker and the Bold Text switch from the Accessibility section also now show up here.

WALLPAPER
Yes, you can rejoice – your wallpaper now has its very own section of the Settings app. Here you can, unsurprisingly, view your current Lock screen and Home screen background, as well as pick new backgrounds. iOS 8 adds no new dynamic wallpaper images, but you will find two new static images: the underwater sea shot so prominent in the marketing, and a white shade of the hexagonal wallpaper already available in pink, orange, blue, green, grey and black.

Breaking out. Wallpaper now has its very own section of the Settings app. You can view and change all backgrounds here.

TOUCH ID AND PASSCODE
In iOS 8, you can enable access to a few more features on a locked phone if you choose to. Specifically, you can toggle on the Today and Notifications View screens for Notification Center.

PRIVACY
With every iOS release, Apple's privacy settings expand and diversify, and iOS 8 is no exception. The biggest addition to the company's Privacy settings screen comes inside the Location Services submenu; here, you've got a new subsection on sharing your location, more refined control for apps and new system services toggles.

Location services. The Share My Location screen lets you turn location sharing on or off globally, lists any friends you're sharing your location with permanently (temporary location-sharing friends won't appear here), and offers a Stop Sharing My Location button for each at the bottom of their contact card.

Apps, too, have slightly more granular settings within Location Services. In iOS 7, you could toggle location services on or off for a specific program. With iOS 8, each app has the 'Allow Location Access' submenu, with options for Never, Always or While Using the App.

Within System Services, you'll find new on/off toggles for the Find My iPhone service, Location-Based Alerts, Motion Calibration, Share My Location, Spotlight Suggestions and Improve Maps (relocated from the Frequent Locations submenu).

Other privacy features. In iOS 8, you can choose whether to allow third-party apps access to your Camera, Health, HomeKit and Motion Activity data; those

apps you've let in will appear in new Privacy menus named after each of those features.

The Diagnostics and Usage submenu (found at the bottom of the Privacy screen) also has a new toggle: Share with App Developers. If you turn it on, this feature lets third-party developers see anonymised crash data and statistics about how you use their apps.

iCLOUD

There are lots of new tweaks and feature additions in the iCloud preferences screen, though the most dramatic comes in the form of the new Account submenu.

For one, you can now see which Apple ID your device is logged in to from the Settings screen, as it's now listed below the iCloud submenu. Tap on iCloud, and the top of the settings screen lists your account, a toggle for setting up Family Sharing, your Storage information, iCloud services and advanced services.

The Account screen is protected by your iCloud password, but once you enter it, you can see and change your email addresses, primary mailing address and whether you want to receive offers from Apple. There are also fields for viewing or changing your account's birthday, password, security questions and rescue email address, along with turning on two-step verification. You'll additionally be able to view your primary payment method associated with your Apple ID, though you can't change it from this screen.

Which user? You can now see which Apple ID your device is logged into from Settings.

Below the Account submenu, you can set up Family Sharing to help share purchased music and the like with family members; there's also a new Storage section, which has split off from iOS 7's Storage and Backup screen.

The Photos subscreen lets you enable or disable iCloud Photo Library; there's also a toggle for automatically uploading Burst Photos.

Within the iCloud Drive subscreen, you can toggle the feature on or off; there's also a section for third-party apps that have looked you up by your email, along with a list of installed third-party apps on your device that can use iCloud Drive.

As mentioned earlier, iCloud Backup has become its own separate submenu, with an on/off toggle and a Back Up Now button. Also new in the iCloud section: a new toggle within the submenu for Find My iPhone called 'Send Last Location'. In case of your device's loss, Apple will beam your device's last known location before shutdown to your iCloud account.

There are also two new sections within iCloud's new Advanced subheader: Mail and Share My Location. The Mail subscreen lets you choose a default address for iCloud, along with choosing aliases and your SMTP server; Share My Location offers the same preferences that the screen of the same name in the Privacy subscreen does.

iTUNES AND APP STORE

The iTunes and App Store section is relatively unchanged, though it does move up in the Settings screen, grouped just after the iCloud screen. There are four new toggles: two for showing all your music and video, and two for displaying suggested third-party apps that tie into your current location on the Lock screen, Home screen and in the app switcher (née multitasking screen).

MAIL, CONTACTS, CALENDARS

The Mail, Contacts, Calendars Settings screen gets a bunch of little settings improvements. For Mail, there's a new Swipe options submenu, which lets you choose a mail action for the app's quick
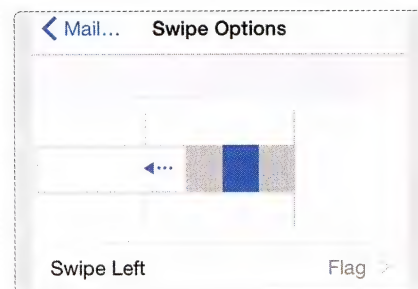
Let your thumb decide. Users can choose what will happen when they swipe right or left on emails in Settings.

left/right swipe gestures; in addition, you can flag addresses that don't end with a certain domain name.

Contacts just gets one new preference, and that's whether or not your people should show up in the app switcher.

Calendars has a few new options, including alternative calendars for Chinese, Hebrew and Islamic people; a toggle for Week Numbers when viewing the app by month; a toggle for 'Show Invite Declines', and a new 'Time to Leave' toggle that estimates your departure time if you add an address to your calendar event.

MESSAGES

Most of Messages' new settings revolve around multimedia. You can now choose whether to keep your messages for 30 days, one year or forever; audio and video messages can be set to expire within two minutes after reading (in true *Mission Impossible* style) and then deleted, or also kept around forever. Message also incorporates a toggle for Raise to Listen, which lets you put the device to your ear to trigger Dictation for a conversation.

MAPS

Maps gains no new toggles; instead, the 'Preferred Driving/Walking' toggle has disappeared.

SAFARI

Want to escape Google's reach? You can now turn DuckDuckGo on as your search engine of choice within the Safari app. In addition, there are four new toggles related to web searches: Search Engine Suggestions, Spotlight Suggestions, Quick Website Search (which allows you to search a specific website by prefacing your search query with an abbreviated form of their name) and Preload Top Hit.

In addition, the Clear History and Website Data buttons from iOS 7 have been consolidated into one button, Clear Cookies and Data.

PHOTOS AND CAMERA

The Photos and Camera submenu has many of the same new toggles as the Photos section within iCloud, including toggles for turning on your iCloud Photo Library and managing burst photos.

FIVE CONVENIENT NEW TRICKS IN SAFARI

BY DEREK WALTER.

Safari for iOS is as old as the iPhone itself, and even with all the apps that have come and gone in those seven-plus years, Safari is the old standby, the essential app that's in the dock row of millions of iPhones and iPads.

Apple improves Safari in every iteration of iOS, and iOS 8 is no exception. The changes aren't radical, but they do add some extra flexibility and convenience to browsing the web on your iPad and iPhone.
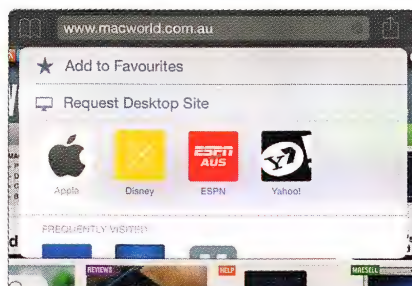
Request the full version. This is especially helpful with sites that insist on serving the mobile version to your iOS device.

GET A WEBSITE'S DESKTOP VERSION

Sometimes you don't want the stripped-down mobile version of a website. Google's Chrome has long had a 'request desktop version' option, and now Safari does also.

To access this, tap the URL bar and give a gentle pull down on the menubar that pops up. You will see two new choices: Add to Favorites and Request Desktop Site. Tap the latter and the page will reformat, usually presenting itself in desktop glory.

SCAN YOUR CREDIT CARDS

Forget squinting at your worn-out credit card to get the numbers when buying something online. Apple's browser has a clever new feature that will scan the information with the device camera.

While Safari already offers to save your cards with auto-fill, this is another step that simplifies the process of buying something online.
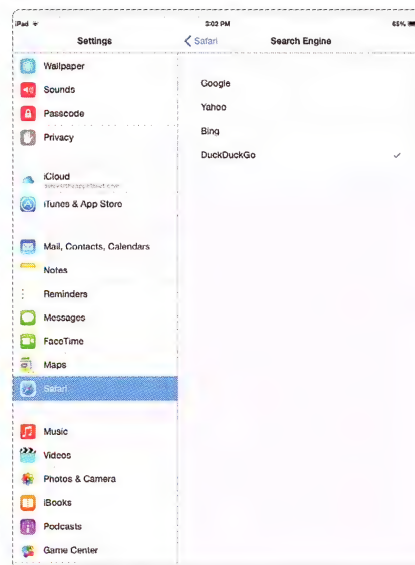
Leaving no trail. Search anonymously in Safari with DuckDuckGo.

SEARCH WITH DUCKDUCKGO

If you are trying to get away from Google's omnipresent eyes, then DuckDuckGo is for you.

It joins Google, Bing and Yahoo as your options for performing a web search from the Safari address bar. DuckDuckGo puts privacy as its highest priority, pledging to never use a user's personal data when delivering search results.

While sometimes that means it's not as sharp with location-awareness or other specific search results, you may enjoy its minimalist design and commitment to anonymity.
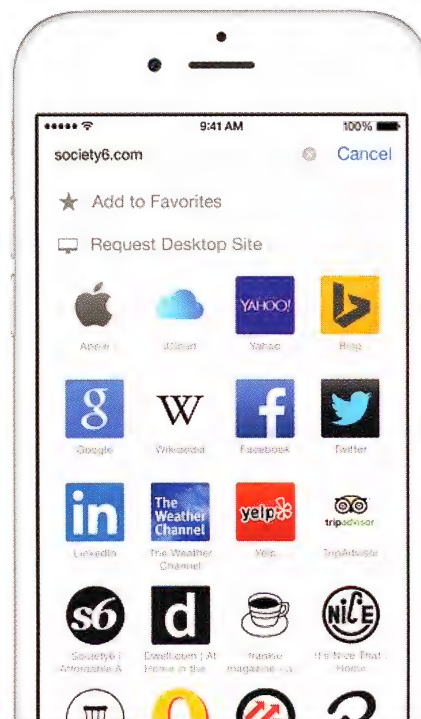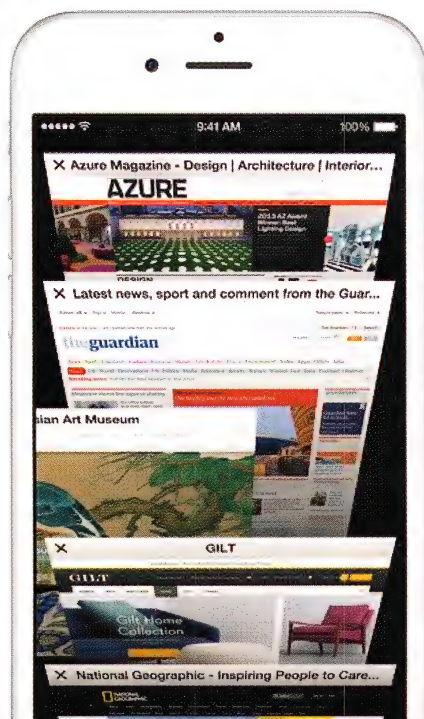
SUBSCRIBE TO AN RSS FEED

Safari lets your mind wander when browsing by offering shared links related to the site you're visiting. Customise this by subscribing to a site's RSS feed so you can get more of their stuff in Safari.

To do this, touch the bookmarks icon and then select the @ column. On the bottom you will find a button labelled Subscriptions. Touch that and then select 'Add Current Site' to include it in the list of feeds.

The shared links section is another nice addition – it clues you in to other articles and discussion related to what you're reading.

ACCESS APP PASSWORDS

As part of Apple's Continuity features, which tie desktop and mobile apps together, iOS apps can now use your saved AutoFill credentials so you can quickly log in. To toggle AutoFill on and off, visit *Settings > Safari > Passwords & Autofill*, where you can also see a list of the accounts for which you let Safari remember the passwords.

Developers have to enable this, so it may not be working on all of your favourite apps. It could be one less annoying step in the ongoing process of typing in passwords (though you should be using a password manager, anyway).

MAIL LETS YOU PROCESS YOUR INBOX QUICKLY AND WRITE BETTER DRAFTS

BY DEREK WALTER.

Slogging through a crowded email inbox is never a fun process, but new tricks in the iOS 8 Mail app at least make the process less painful. You can swipe away messages as if your thumbs are machetes hacking through a jungle, and customised alerts let you go longer between checking your

email since you know that really important message will find you.

It's time to retake your inbox. Put these tools to use so you can spend less time in Mail and more on things that are actually enjoyable, like shooting slo-mo videos and sending voice messages.

MINIMISE THE COMPOSE BOX

The first tip is one of those simple features that doesn't seem like a game-changer but after a while you won't know how you ever lived without it.

When composing a message you can slide the compose box to the bottom of the screen and navigate around the rest of your email. This allows you to find content from another message that you may need before hitting Send.

To get your message back just swipe up from the bottom. The only trick is you have to be careful you don't aim too low on the screen and accidentally pull up the Control Center.

SET ALERTS FOR EMAIL THREADS

You may not want a notification for every message, but sometimes there's a particularly important thread you want to follow. Now you can set an alert for this, so if anyone responds to the set of messages you will get a push notification.
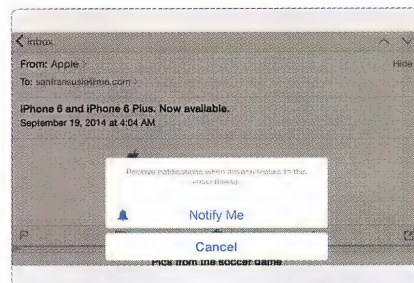
Alerts. Get notifications on a specific thread you want to follow.

There are a few different ways to turn on the thread alert. You can touch the flag icon at the top of the message or swipe to the left and touch More then Notify Me.

SWIPE TO QUICKLY TRIAGE YOUR MAIL

Sure, this trick is heavily inspired by Mailbox (www.mailboxapp.com), but hey, all great artists steal, right?

You can now swipe to trash a message (or archive it, if you're using Gmail), flag it or get other choices for organisation. Swipe once to the right to mark a message as unread.

You can also customise the swiping. Head to the Settings under Mail, Contacts, Calendars and choose Swipe Options. This gives you a tad more flexibility in setting up which direction you want to flick.
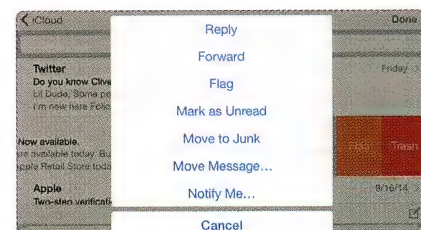
Swipe it. Archive, flag or perform several other options to a message by swiping to the left.

ADD INFORMATION DIRECTLY TO CONTACTS

If you get a message from someone that you want added to your contacts, be sure to take advantage of this tool.

Mail looks at the content of the message and can discover phone numbers, email addresses and other contact information that can be nicely packaged into your address book.

When prompted, tap Add to Contacts and select the information that you want to add in.
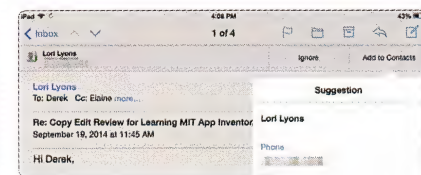
Contacts. Mail can now smartly find contact information and add it to your address book with one tap.
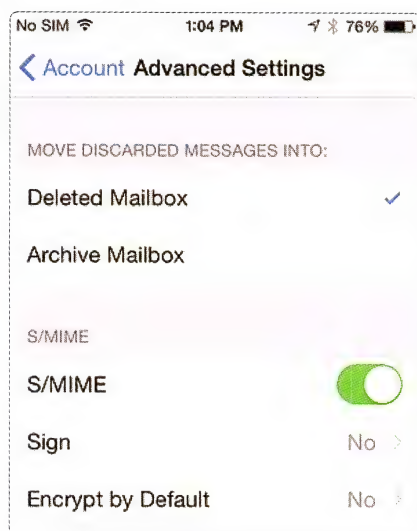
Advanced setting. Get deeper email encryption options in iOS 8.

MORE TOOLS FOR EXCHANGE ACCOUNTS

If you use a corporate Microsoft Exchange account, Mail has some tweaks just for you that are smaller but still much needed and very welcome.

The availability will depend upon what your administrator has enabled, but there are more options to be found in the Advanced Settings.

You can use S/MIME, which adds higher-level encryption to messages. Messages from outside-the-organisation can be marked in red if you want to step up your security. There is also an option for auto-reply messages, though again this takes some work on the back end by your IT department.

NEW CAMERA TRICKS AND A MAJOR OVERHAUL OF PHOTOS

BY SERENITY CALDWELL.

While we love to do many things with our iOS devices, the feature that often tops my list is taking and sharing photographs. In an age when we're taking in new experiences faster than we can blog or tweet about them, snapping a quick image

on the go can be just the thing to help us remember a good day on the beach.

Apple's iOS 8 packs in a tonne of new photo-taking and editing features for its photography-loving user base, all the while keeping it easy for beginning iOS shutterbugs. There's a lot to look at here, so let's start with something simple: the Camera app.

CAMERA CH-CH-CHANGES

Upon launch, the Camera app in iOS 8 looks very similar to its iOS 7 counterpart, albeit with a few extra buttons. New to the top of the screen (or left, in landscape orientation) when in Square or Photo mode is the Timer button; tap it, and you can set a self-timer of three or 10 seconds. (Of course, should you need more flexibility in your timing options, there are plenty of third-party apps that may suit your needs.)

Also new to the Camera (and continuing the 'Time' theme) is Time-lapse mode, found by swiping all the way to the right on the app's display. Unlike other timelapse apps, Apple's version is entirely automated; just tap the record button and the app will automatically take a still picture every few seconds. When you're finished, it stitches those pictures together to form a time-lapse video.

If you're the lucky owner of an iPad
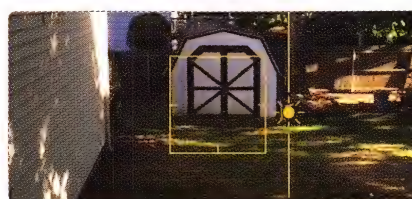
Exposure levels. When you tap to focus, there's now a separate slider for adjusting a photo's exposure.

Air or iPad mini with Retina display, you'll also now be able to use the Camera app to take panoramic images. Previously, the Panorama feature was limited to iPhone users.

iOS 8's new manual camera controls may be my favourite improvement to the app, however. In iOS 7, tap-to-focus and exposure lock were a single control; with this update, they've been split. You can still tap to grab focus (or long-tap to lock it), but now you can additionally adjust the camera's exposure by dragging up or down on the sun slider that appears. This lets you grab a focus point without being forced to also use its lighting as your photo's exposure.

ALBUMS, ALBUMS, EVERYWHERE

Apple's automatic smart albums continue to provide some use in the Photos app. The Camera Roll has disappeared, and in its place is the Recently Added smart album, which collects images you've recently taken or added to your device. It joins app-specific and content-specific albums on the Albums page, along with the new Favorites album (more below). Sadly, Apple continues to decline to make a Screenshots smart album (to my own personal disappointment).

Meet your favourites. Having all those images at hand may make you nervous about ever finding anything again. Apple has anticipated your concern, though, by adding both a smart search feature and a Favorites section. The search field will initially prompt you with a collection of nearby photos, images taken at the same time last year (for nostalgia factor), and

all-time favourites; but you can also search by date or time, location or album name.

Under every picture in your library is a small heart outline; tap the heart to fill it and add the image to your Favorites album. You'll be able to access that album on any iOS 8 device (or, in 2015, on your Mac) and any edits you make to those images that automatically sync.

Hidden images. Sometimes, we take photos we don't necessarily want to keep in full view. iOS 8 allows you to hide those unwanted images from the Moments, Collections and Years sections of the Photos app, though they'll still appear in albums. To hide an image, just tap and hold on its thumbnail, then tap Hide. It then vanishes, relocating to the Hidden smart album. To recover the photo, just visit the Hidden album and tap and hold the thumbnail to unhide.

Undelete. Unlike past versions of iOS, when you delete an image in iOS 8, it's not immediately removed from your device. Instead, it retreats to the new Recently Deleted album for 30 days, at which point it's expunged from your device.

This is primarily to prevent you from accidentally deleting that perfect picture when you're weeding out duplicates and blurry images, but it's also a nice way to temporarily remove images you're not sure you want to keep. You can dump this entire folder quickly by going to the Recently Deleted album, tapping Select then tapping the Delete All button.
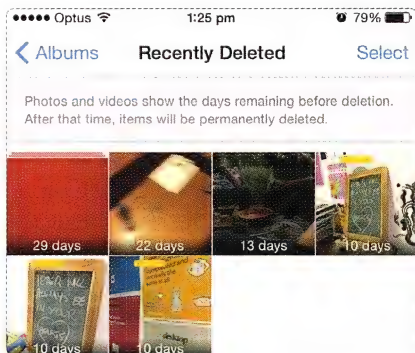
Change of mind. With iOS 8 you have 30 days to revive an image before it is deleted.

Colour range. By default, the image adjustment tools change your photo on a broad scale.

EDITING SPREE

In iOS 7, the Photos app offered a few basic editing features and filters, but for anything fancy, you needed to download Apple's iPhoto app. In iOS 8, iPhoto has been retired, and bits and pieces have made their way into the Photos app, offering you all sorts of advanced editing features.

Download an image to your device, and you'll be able to use a bevy of iPhoto-inspired features to crop, straighten, remove red eye, adjust lighting and contrast, and more.

The filters introduced in iOS 7 are here to stay, and though they gain no new counterparts, iOS 8 does introduce a new adjustments control that lets you alter a photo's light, colour and (if you choose to go the greyscale route) its black and white intensity.

Adjustments aplenty. Tap on a specific adjustment in the adjustments list to individually change its value.

Tapping on one of those three options will bring up a thumbnail slider to increase or decrease the option as a whole; however, if you tap the list icon above the thumbnail slider, you can see the individual values being adjusted (for instance, the Color slider controls Saturation, Contrast and Cast). Tap one of those, and you'll get a detail slider to adjust those specific values alone.

All these edits sync across your devices, so that the fixed image appears in your library immediately. They'll also be non-destructive: if you decide you prefer your image unfiltered, you'll be able to revert it.

On top of that, iOS's new Actions options for developers means that your favourite third-party apps can provide filters and adjustments that you can use from within the Photos app just by tapping the Edit button, then tapping the circle icon with ellipses in it to access the app.

HEALTHKIT AND APPLE'S NEW HEALTH APP

BY RYAN FAAS.

New to iOS 8 is Apple's HealthKit platform, which offers the ability to track and share a vast range of health, fitness and medical data points across multiple apps and devices. It can be used as a wellness and fitness tool – aggregating data about diet, activity, exercise and sleep from multiple sources – as well as a serious medical tool for managing and monitoring chronic conditions.

It's a dynamic platform, working hard behind the scenes to deliver a personalised experience to each iPhone user, using data pulled from your iPhone's M7 or M8 sensor and allowing you to view all of this health data inside one app. Here's a quick guide to getting started and setting up your own health database.

BEHIND THE SCENES, YET ALWAYS WORKING

As a medical tool, HealthKit offers tremendous value for a few different reasons. It can aggregate data from a range of apps or connected medical devices, like a glucose meter or blood pressure cuff, as well as consumer-oriented fitness devices. It also offers the ability to automate the recording of medical metrics.

If you're using connected devices, this helps to ensure the accuracy of the data because it goes straight from the device to the associated app on your iPhone and then into HealthKit. If your doctor's office uses an electronic records system that supports HealthKit, that data can then be automatically entered into your medical record.

For the most part, you don't interact with HealthKit directly. The platform is really little more than a data store on your iPhone, and apps can write information into and pull information out of it. Some apps do both, though others may only input data or retrieve it.

Most of the actual processing of HealthKit data – comparing the calories you've eaten with the number you've burned throughout the course of the day, getting data from a fitness tracker or other device, or compiling information and sending it to your doctor – is done in the third-party apps that send information to and retrieve it from HealthKit.

Apple's Health app, which is pre-installed on any iPhone 4s or newer running iOS 8, is the exception to this rule. It provides you with the ability to view all of your HealthKit data from every HealthKit-compatible app. It also allows you to manually enter data and includes a dashboard for visualising the data.

Health also includes a Medical ID feature that allows you to record important medical information – conditions, medications, allergies and emergency contacts (which can include your primary care doctor or specialists). You can choose to have your Medical ID available from your phone's lock screen in case of an emergency where you're unable to provide that information. You can access this by tapping the Emergency button when asked to enter a passcode, which also allows your iPhone to make 000 calls while locked.

WORKING WITH THIRD-PARTY APPS

When you install an app that supports HealthKit, you'll need to configure it to access various types of HealthKit data. That process will vary from one app to the next, but typically the option to set up an app's connection with HealthKit is something you see the first time you launch an app or it's located within the app's settings. Most apps will also let you choose what metrics you want to record, access or process – just switch on the appropriate toggles.

When you configure an app to work with HealthKit data or if you later adjust which metrics it works with, you'll see a permissions screen called Health Access. The screen will identify the app and show you exactly which data points it will write into HealthKit and which ones it will read out of HealthKit. You need to explicitly confirm you are giving the app permission to access each individual data point both to write and read. This means that you know exactly what information an app can work with and ensures that apps cannot access data without your knowledge and consent. ◼
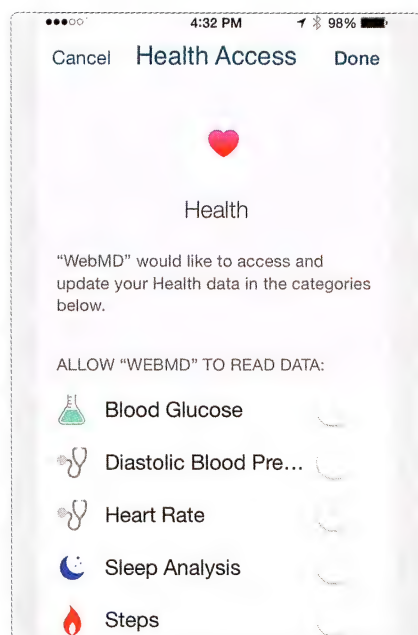
Access. Different HealthKit apps want to access different data points, which you can grant at will.
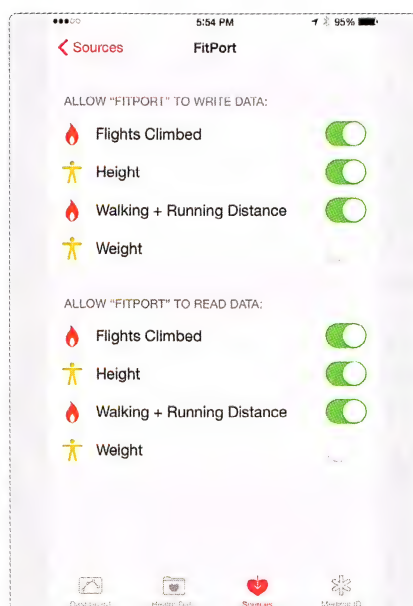
Third-party sharing. Certain apps can create data to share with other apps. Some pull data and present it in unique ways.

How to create Music playlists on your iPhone or iPad

BY CLIFF JOSEPH

Before I went on holiday recently I was planning to prepare a couple of happy holiday playlists using iTunes on my iMac that I would then download onto my iPhone. But, of course, I never got around to it until I found myself sitting on the plane to sunny Portugal.

When I tapped the Playlist button on my iPhone I discovered two playlists that were already there. The Purchased playlist is compiled automatically by the Music app to keep track of the songs you buy, while the 70s playlist was one that I created on the iMac during a bit of a retro phase recently.

You can tap on any of these playlists to listen to your music, but there's no obvious way here to create an entirely new playlist on the iPhone itself.

After randomly tapping around for a bit I discovered that you can do this simply by swiping your finger down the screen. This 'pulls' the New Playlist command and the Search tool down from the top of the screen.

ADDING AND SEARCHING FOR TRACKS

As you'd expect, the Search tool allows you to type in the name of a song, artist or album in order to quickly locate a particular track, but you can't use it to add songs to a playlist just yet.

The Music app on iOS devices isn't as sophisticated as iTunes on the Mac and it lacks features such as the 'smart playlist' option in iTunes that can automatically locate tracks that fit certain criteria, such as the length of the song or the year it was released.

That means we have to tap the New Playlist button to name the playlist and then start adding tracks by hand. There doesn't seem to be a quick way of changing the name of a playlist once you've created it, so make sure you've chosen a suitable name and the spelling is all correct before hitting Save.

The Music app will now display the full list of all the songs you have on your iPhone, with a '+' sign by each song.
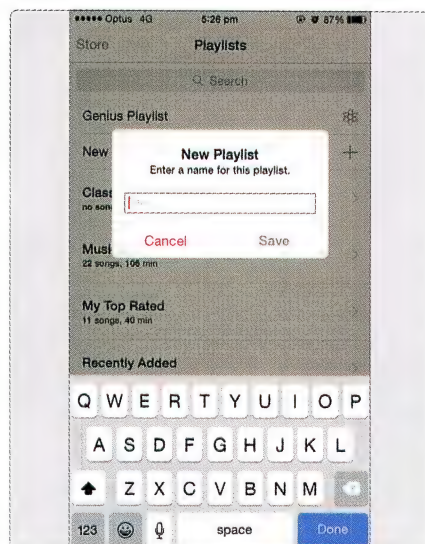
New list. In the Playlists tab, select New Playlist… to create a new collection of songs.
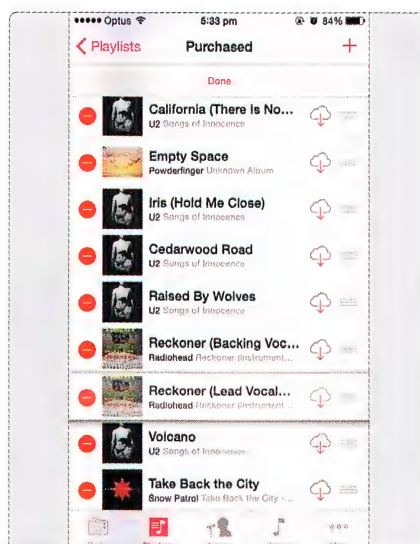
Sort it. Tap Edit in the top right-hand corner to rearrange the playlist's track listing.
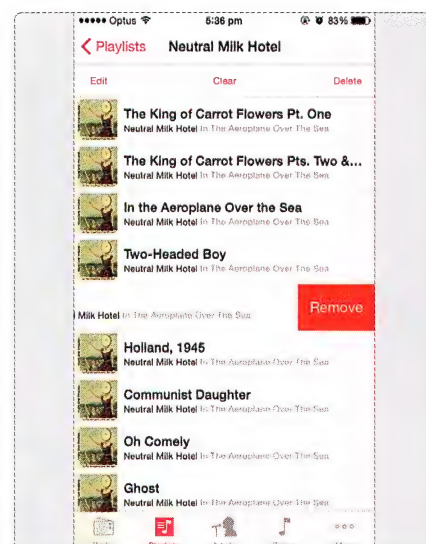
Delete them. Swipe right on any track you would like to remove from the playlist and select Remove.

You can scroll through the list of songs just as you would normally, and then tap on the '+' sign to add each song to the playlist.

You can also tap the buttons at the bottom of the screen to browse your music by album, artist or genre.

The '+' sign will show in those lists as well, so you can browse through your music any way you want and quickly add songs to your new playlist.

If you know exactly which songs you want on your new playlist then you can use the Search tool to quickly locate songs by name rather than scrolling through your entire library list.

To display the Search tool you need to place your finger about half-way down the screen and then swipe downwards (don't swipe down from the top of the screen as that just pulls down the notifications bar).

When the Search bar appears you can type in just one word from the title of the song and the app will display a list of all the songs and albums that include that word.

When you've found all the songs you want you can just hit the 'Done' button in the top-right corner of the screen and you'll see the contents of your new playlist displayed on the iPhone screen. You can tap on any song to start playing, and the songs will play in the order that they were added to the playlist.

Alternatively, you can pull down on the screen again to display the Shuffle option and play the songs in random order.

It's also possible to reorganise the songs on the playlist by tapping on the red Edit button at the top of the window.

A number of new options appear when you press the Edit button.

The red circle just to the left of the song's artwork allows you delete a track from the playlist altogether.

The app will always ask you to confirm the deletion before removing the song so you don't have to worry about deleting anything accidentally.

And, of course, the song is only deleted from this playlist, leaving the original song as part of your music library.

A red '+' sign has also appeared in the top-right of the screen as well, so you can just tap this to add more songs to the playlist whenever you want.

As well as adding and deleting songs from the playlist you can change the order in which the songs play too.

The grey three-bar symbol that is further over to the right of each song title allows you move songs up or down in the playlist order. Press and hold on that three-bar symbol until a new outline bar appears around the

song title, and then just drag the song into a new position in the playlist.

Hit 'Done' to return to the main playlist window.

You can delete tracks from this window as well, without having to hit the Edit button, simply by swiping your finger to the left across the song title.

There are two other commands also highlighted in red at the top of this window.

The Clear button removes all the songs from the playlist so that you can just start again from scratch.

The Delete button removes all the songs and the playlist itself, so that it no longer appears in the main Playlist view anymore.

BACK TO MAC

Unfortunately, there isn't a quick way to transfer playlists from an iOS device back onto your Mac.

If you want to copy the playlist onto your Mac you need to plug your iPhone into the Mac and then use the 'On This Phone' option in iTunes to view the music and playlists stored on the iPhone.

⌘-click on the name of the playlist and then use the Export command to export the playlist as an XML file.

Now go to the main File menu, select Library, and then use the Import Playlist command to import that file and add the playlist to iTunes. ▨

10 Android Lollipop features Apple should 'borrow' for iOS 9

BY MICHAEL SIMON

Apple and Google are locked in a never-ending game of catch-up. Each time a new version of iOS or Android is announced, there are just as many borrowed features as new ones, as each side studies and pilfers the other's ideas to find ways to better its own experience. Android Lollipop's Material Design is awfully similar to iOS 7's flattened design language, and iOS 8's newfound openness certainly owes a debt to Lollipop's predecessors.

But neither iOS die-hards nor Android fans should complain. The fact is, there are greener spots of grass on both sides of the fence. Now that the new Android OS is out I've found a few features Apple would be smart to incorporate into iOS 9.

SMARTER NOTIFICATIONS
Lollipop took a number of cues from Apple for its revamped method of delivering notifications, but Google still added its own twist. My favourite feature is the new heads-up banners for the Phone app, which lets you ignore incoming calls without having them interrupt a game of *Replay*. I also like how it handles the lock screen: incoming notifications are sorted by importance, so a mail message from someone in your contacts will be naturally ranked higher than a *Candy Crush* full lives alert.

PRIORITY MODE
On the surface, Lollipop's Priority Mode looks an awful lot like iOS's Do Not Disturb feature, but I'm actually a little envious of Google's implementation. While on iOS it's kind of an all-or-nothing affair, Android gives you more control over what won't be disturbing you and when.

Instead of just calls, Google lets you allow events and reminders to get through, but what I really like is the
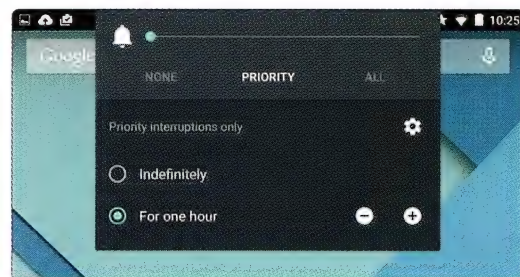
timer setting. If you just need to take a nap or get some work done, you can quickly turn on Priority Mode for a short time without needing to deal with scheduling math.

BETTER BATTERY
As long as Apple keeps making its devices as thin as the laws of physics and engineering will allow, battery life will always be precious. Like iOS 8, Lollipop lets you see which apps are using the most juice, but Google also built in a Battery Saver mode that kills unnecessary processes, throttles the

CPU, and limits background tasks when the battery reaches the red. And when you finally plug your device in, it can also tell you how long it'll take to charge, something I'd love to see on my iPhone.

GUEST MODE

Apple fans have pretty much given up on the prospect of multiple user accounts in iOS, but the fact of the matter is there are times when we need to share our phones. And Google has developed an ingenious method for doing so: switch to a guest user on a smartphone or tablet running Lollipop, and not only will your own personal information stay private, but also everything your guest does will be deleted once they log out. It's like private browsing for your whole phone, and we need it in iOS 9.
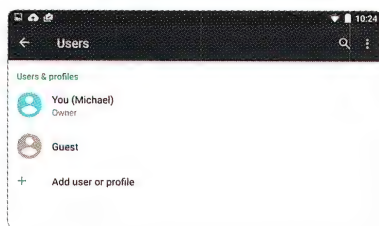
MULTI-MULTITASKING

iOS and Android both have a very similar method of multitasking, with a swipeable card system that lets you quickly switch between apps. But Lollipop does it just a little better.
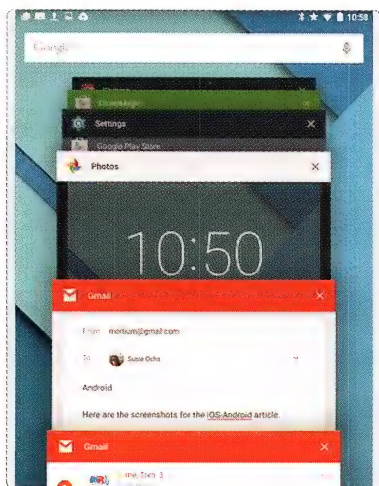
When you enter Overview, you'll get more than a menu of your recently used apps. Every task and tab that's running will be displayed, so if you're working on a draft of an email message, for example, you can choose to either jump back to the compose windows or to your inbox. And on your phone, you'll see all of your open tabs, too.

PRINT PREVIEW

iOS's print screen has never been much to write home about, offering only the most rudimentary of options. By comparison, Lollipop makes it seem like you're sitting in front of a PC, with a desktop-calibre preview screen that lets you see exactly how a picture or document is going to print.

And if no wireless printer is available, Lollipop users even get a save-as-PDF option, something I've been pining for since the days of iOS 4.

TAP SCREEN TO WAKE

Clicking the home button isn't exactly a difficult way to wake up an iPhone, but Lollipop brings a new way for supported Android phones to wake up: just tap the display twice. That would certainly save me from some fumbling when I check my email on the iPhone 6 Plus before my first cup of coffee.

SEARCH IN SETTINGS

With each iOS revision, we expect Apple to finally add a way to search inside Settings, but it hasn't happened. Now Google has beaten Apple to the punch, adding an enormously handy magnifying glass
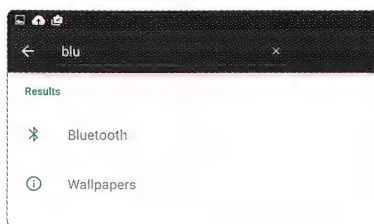
to the top-right corner. I hope iOS fans don't have to wait much longer, because I'm tired of remembering where to go when I want to swap out my keyboard.

AMBIENT DISPLAY

I know what you're thinking: iOS has had an ambient mode for years. It's true that Android's new ability to wake the display every time a notification comes in is old hat for iPhone and iPad users.

But in Lollipop it's an option and, quite frankly, I'd love to be able to temporarily turn off all lock-screen notifications with a single toggle.
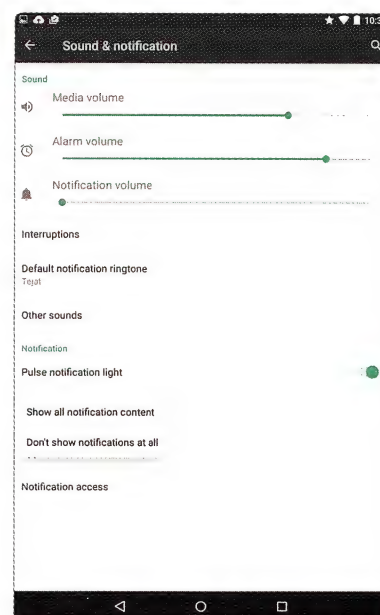
SMART UNLOCK

Touch ID has made it easier than ever to unlock an iPhone or iPad, but there are still times when we kind of wish we didn't have to use it. Google's found a middle ground between convenience and security that I'd love to see Apple adopt. When you get a new Bluetooth or NFC device, paired Lollipop phones and tablets will automatically unlock whenever they come within range of it. And I can think of something coming out early next year that would work really well with such a feature…

BitTorrent Sync

How to create a personal cloud with BitTorrent Sync

BY JOE KISSELL

BitTorrent Sync (www.getsync.com) is free software, available for all major platforms, that keeps folders in sync across your devices and enables you to share them securely with other people. That may sound suspiciously like Dropbox, iCloud Drive and dozens of other cloud storage services – and, indeed, the end result is much the same. The big difference is that BitTorrent Sync uses peer-to-peer networking rather than relying on cloud servers.

This approach has several significant advantages. You can have as much storage as you like (limited only by your local disk space) without paying a cent, and because your files are never stored in the cloud, no one else can access them without your explicit permission.

There are downsides too, though. At least one of the computers where your files are synced must be turned on and accessible to the internet for you to access your files, and you'll be subject to your ISP's bandwidth and data caps. Although BitTorrent Sync encrypts your data as it travels between your devices over the internet, it doesn't encrypt files on disk – if you want to do that, you're on your own. And you're unlikely to find many third-party iOS apps with built-in support for BitTorrent Sync, whereas support for Dropbox, iCloud Drive and other cloud services is common.

For now, I suggest thinking of BitTorrent Sync as a supplement to cloud storage, not a replacement. Even though it has been available for nearly two years and is now at version 1.4, it's still considered beta. Although I haven't encountered any serious bugs, some aspects of its user interface are still obscure or confusing, and setup requires a somewhat odd series of steps. I'll walk you through some of the basics.

SET UP FOLDER SYNC

Once you've downloaded and installed the software, BitTorrent Sync offers several ways to set up syncing between folders on your devices. I'll describe the simplest approach here; for other options, head to help.getsync.com.

On a Mac that has a folder you want to sync, open the BitTorrent Sync app. Click Add Folder, navigate

Restrict access. You can choose Read Only or Read & Write, among other options, when syncing a folder – either with your own devices or with other people.

Simple window. BitTorrent Sync's unassuming, customisable main window shows all the folders you're syncing and how many peers each one has.

to the folder you want to sync, select it and click Open. In the dialogue that appears, select Read & Write under Permission (to let yourself modify the folder on any of your own devices). Click Email to create a new message in your default email client, address it to yourself and click Send.

So far, you've merely made a folder available for syncing. The next step is to set up a peer – another device that will sync this folder.

To set up another Mac as a peer, open the email message you just sent yourself on that Mac and click the link. A webpage opens with two buttons. If the Mac already has BitTorrent Sync installed, click 'I already have Sync 1.4'. If not, click 'Install Sync 1.4 Beta' to download and install the software, and then return to the page and click the other button. (As time goes on, the version number on the buttons will presumably change.)

In the dialogue that appears, make sure the path shows the correct location of the folder you want to sync with, which must have the same name (not necessarily the same location) as the one on the first Mac.

If not, you can edit it or click Change and navigate to a new location. Be careful here – if you're syncing a folder named Example and you choose, say, /Users/you/Example in this dialogue, BitTorrent Sync will add a folder at /Users/you/Example/Example. If you want to sync with an existing folder called Example, choose its parent folder (as in /Users/you) or edit the path manually to eliminate the duplicated folder name. (If the folder you select doesn't already exist, BitTorrent Sync creates it. If it does exist and you click OK at the 'Add anyway?' prompt, the

software merges the contents of the folder on the second Mac with the contents of the folder on the first one.) Click Connect.

Now go back to the first Mac, where BitTorrent Sync shows an alert asking you to approve access from the new client. Click the green check mark to approve.

And that's it – from now on, the folder you selected on each end should stay in sync across your Macs as long as they're both online. (For files over 4MB, BitTorrent Sync copies only the changed portions of files, in 4MB chunks, which speeds syncing considerably.) You can open the same email message on additional computers and click the link to add more peers, or repeat the entire process to sync additional folders.

You can also use the BitTorrent Sync iOS app (or comparable apps for other mobile devices) to view or download any of your files, although the mobile apps don't sync entire folders automatically since that could overwhelm your device's storage.

SHARE A FOLDER

You can also share any of your folders with other people, either read-only or read-write. To do this, open BitTorrent Sync, highlight a folder and click Share. Choose the options you want, which are identical to those you saw when you set up the folder for syncing, and click Email to send someone an invitation.

As is the case when syncing your own folders, each person you

share with must have BitTorrent Sync installed on at least one device. Unlike cloud storage services, there's no website someone can connect to to see your files in a browser.

FEELING LEFT OUT

The least intuitive aspect of BitTorrent Sync is how to go about excluding a file or folder from syncing when you're syncing its parent folder. For example, if I have an app that already syncs its data across Macs in some other way (DEVONthink Pro Office is one such app I use every day), letting BitTorrent Sync copy the same files would lead to conflicts and inconsistencies. So I want to tell BitTorrent Sync, "Sync everything in this folder except the following subfolders."

Doing this requires editing an file in an invisible folder – not exactly user-friendly! Here's how. In the Finder, choose Go > Go to Folder, enter the full path of the folder you're syncing followed by /.sync (such as /Users/joe/Documents/.sync) and click Go. In the Finder window that opens, double-click the file IgnoreList to open it in TextEdit (or your default app for text files). Add the file(s) or folder(s) you want to exclude at the end of the list, one item per line. (You can use the wildcards * and ? to indicate patterns, such as IMG_*.jpeg.) Save the file.

From now on, the designated items will no longer sync, but BitTorrent Sync doesn't remove any copies that had already synced to your other devices – you'll have to do that manually.

Share. You can share a folder you aren't even syncing with any regular clients.

Ignore these files. It would be nice if the BitTorrent Sync client had a user-friendly interface for excluding files, but adding them to this IgnoredList file isn't too difficult.

STM READER TIP

Setting an external display as the default/main display on a Mac

One of the things that has eluded me for some time is how to set the external screen on my MacBook Pro as the main screen, fortunately there is a very simple way to set which of the two (or more if you're lucky enough to have a machine that handles multiple screens) is set as the default.

First, open System Preferences and the click on Display Preferences.

In the Display Preferences window choose Arrangement. Here you will see blue rectangles representing each of the screens attached to your machine. On the screen that is your current default screen you will see a white bar along the top.

Click and drag this bar and drop it onto the screen, which you want to become the new default and close Display Preferences. You'll now see that your chosen screen is the new default.

In my case, having a 24in monitor as the default is much easier than working on the original 15in MacBook screen.

Hopefully this tip will be of use to others.

Jamie Dobbs

■ **EACH MONTH, STM** gives a prize to the *Macworld Australia* reader who submits the best and most useful tip (undocumented tips preferred). This month's prize is a comfortable and portable STM sequel small laptop shoulder bag worth $99.95.

Your daily gear travels in sleek protective style. The sequel is the perfect, just the essentials bag for your 13in laptop, tablet, a couple of files, cords and chargers.

Features:
- main flap secured with light but durable brushed aluminium buckle with easy one-handed click-and-go design
- laptop compartment lined with soft nylex and high-density foam to protect most 13in screens (will hold most laptops from 12-14in)
- front zippered stealth pocket is lined and accessible without opening main flap - perfect for sunnies or a phone
- dedicated tablet slip pocket with soft nylex lining
- organisational front pocket for biz cards, pens, keys, etc.
- slip rear pocket for some reading material with quick drop phone pocket
- luggage pass through secures the bag to the handle of your wheeled travel piece
- padded, non-slip shoulder pad for a comfortable carry
- quick cam-adjust shoulder strap for both cross body and shoulder carries, and
- water resistant 320D brushed poly main fabric with 640D reinforced bottom fabric

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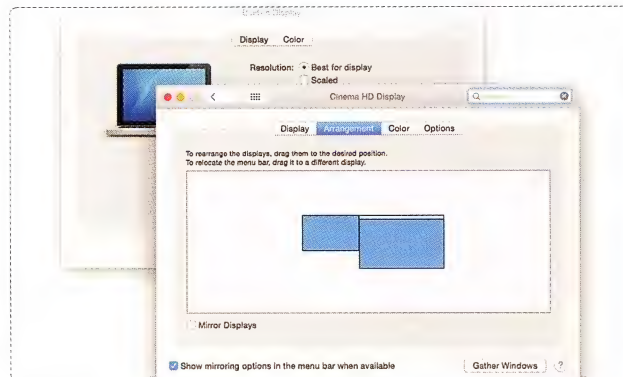
iCLOUD TWO-STEP VERIFICATION JUST ADDED ANOTHER STEP: APP-SPECIFIC PASSWORDS

I use Outlook for Mac for my email and today it's been telling me that my iCloud account isn't authorised. I've entered it multiple times and it still won't work. I've tried other third-party apps that use iCloud and am having similar difficulties. Any idea what's going on?
Darlene Brian

If I had to guess I'd say that you have implemented two-step verification for your Apple ID. As of the time of writing, Apple requires that you generate app

specific passwords for third-party apps that use your iCloud data. This includes apps such as Outlook and BusyCal.

In order to generate one of these things you must go to Apple's My Apple ID page (appleid.apple.com), click Manage Your Apple ID, login, verify your login through the two-step process, select Password and Security, and then click Generate App-Specific Password. You'll be prompted to name the password (you could call it Outlook, for example) and then you'll receive a 16-character password that will work with one of your apps. While you're there you'll want to generate more passwords for your other third-party apps. How inconvenient you find this depends entirely on the number of non-Apple apps you use that interact with iCloud.

At the risk of editorialising, I'm torn on this effort. I understand that Apple wants to do everything it can to make iCloud secure and I applaud that effort, particularly as hackers get more expert and Apple steps ever more into the financial arena.

But I faced the same situation earlier where apps that worked yesterday were nagging me for an iCloud password that didn't work. Rather than deal with the bother I simply turned off two-step verification. I understand that I'm not a paragon of patience but I fear that others will do the same thing, thus leaving their account less secure than it was before this policy was implemented.
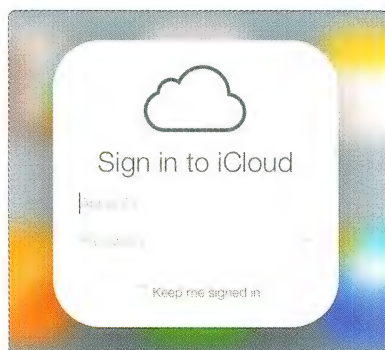
? HOW TO TRANSFER CAMERA IMAGES TO AN iPAD WITH AN OLD ADAPTER

When I purchased my original iPad I also bought Apple's iPad Camera Connection Kit – the two adapters that let you import pictures via USB or an SD card. I now have an iPad Air and wonder if there is some way I can continue using them.
Joan Morton

The unspoken elipsis in your question is "These things have a 30-pin connector and my iPad Air has a Lightning connector so…."

The answer is yes, you can continue to use them with the assistance of a Lightning to 30-pin Adapter, such as the $39 model offered by Apple. You just place it between the iPad and original camera connection adapter and you'll still be able to import your images from a connected camera or SD card.

Alternatively, you can start fresh by purchasing an adapter specifically made with the Lightning connector in mind. Apple offers two in the form of the $39 Lightning to USB Camera Adapter and the $39 Lightning to SD Card Camera Reader. If you use only one of the adapters that came in the original iPad Camera Connection Kit it's six-of-one, half-dozen-of-another. If, however, you found a use for both of the original adapters, pay $39 once and get the Lightning to 30-pin Adapter.

? ONE EMAIL TIP EVERY MAC USER SHOULD KNOW

I carried out all the steps to export the mailbox from my Windows PC and import it to my Mac. I now have an mbox file that I'd like to bring into Outlook for Mac. But when I try to import it, Outlook gives me the option of importing only two types of files – pst and olm. There is no mbox option. Please help.
Sushil Pradhan

When you choose *File > Import* in Outlook you do indeed see the option to import an Outlook Data File (in .pst or .olm format). And, as you've discovered, if you try to import your mbox file using this option, you get nowhere fast. However, if you instead choose Contacts or messages from a text file in that same Import window and then click the next arrow, there's your mbox option. Enable that, click the next arrow again, and then navigate to and open the mbox file. Your messages should import as expected.

? ANOTHER EMAIL TIP EVERY MAC USER SHOULD KNOW

I have a lot of mailboxes in Apple Mail on my MacBook Pro to sort and manage my mail. Many of them are in alphabetical order, but some of the more recently created ones simply fall in line at the bottom vertically. I'm baffled as to how to get them all to appear in alphabetical order. Any advice here?
Ronnie Greher

When you create a new mailbox within Mail by selecting *Mailbox > New*

Mailbox and then choose a place to put it – within an IMAP account or on your computer – it should appear in alphabetical order under the location heading you've chosen. If it doesn't, you can simply drag it to where you'd like it.

However, if the mailboxes within an IMAP account are out of order, there's a trickier way to do it. Choose *Mail > Preferences > Accounts*, select the account that exhibits the out-of-order mailboxes, and uncheck the Enable this account option and close the preferences window. The account will disappear from your list of accounts in the sidebar. (Never fear, copies of your email are still on the server.) Now return to this same Accounts preference and enable the option that you just unchecked. Mail will refresh the list of mailboxes and display them in alphabetical order.

? HOW TO MAKE SENSE OF SAFARI'S NEW FAVOURITES BOOKMARKS

How do you edit and arrange bookmarks in Safari 8.0?
John Toman

What's likely throwing you is the new Favorites view. This is the one where you launch Safari and the bulk of its window contains icons representing bookmarks and folders. These are

simply larger representations of those items as they're arranged in your list of favourites.

Let's do a couple of things so that this makes more sense. First, choose *View > Show Favorites Bar*. Ah, there are your favourites as you once viewed them. If you now compare what appears in the Favorites Bar with the icons below, you'll see that the order of each matches. When you drag an icon to a new location, its location in the Favorites Bar will change as well.

If you don't care for this view, you can pretty well eliminate it. To do that open Safari's Preferences, click General and configure the New Windows Open With and New Tabs Opens With options so that they're something other than Favorites. (I almost always choose the Empty Page option.) If you lay off the Favorites button at the far left of the Favorites Bar you should be largely icon-free.

But perhaps you want to organise and edit bookmarks the old-fashioned way. The shortest route to doing so is to choose *Bookmarks > Edit Bookmarks* (⌘-Option-B). This fills Safari's window with all the bookmarks it's familiar with. Alternatively, you could click the Show Sidebar button in the menubar, select the Bookmarks tab and then click the Edit button at the bottom of the pane.

Once you're there you can rearrange their order, rename them,
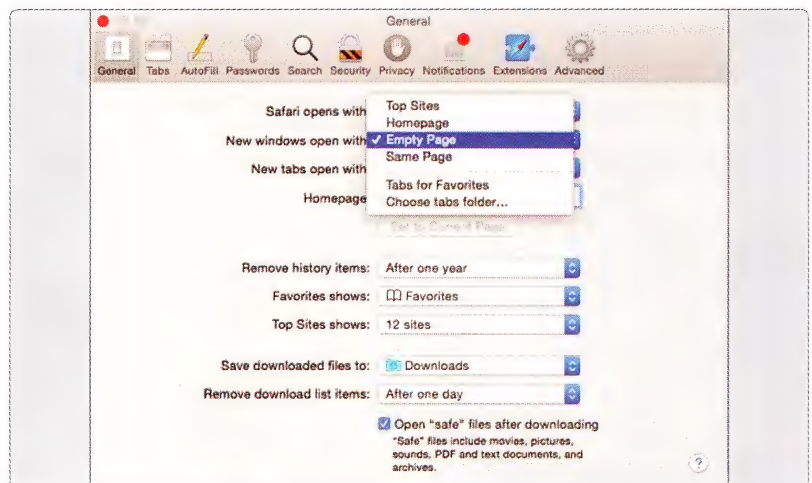
edit their URL, create folders and drag collections of bookmarks into those newly created folders.

As you've come all this way I feel that I ought to throw in a little something extra, so allow me to do so with this oldie-but-goodie: how to alphabetise your bookmarks.

Within this bookmarks editing pane, create a folder and toss in the bookmarks that you'd like to view in alphabetical order. Now drag this folder to the desktop. Open it and you'll find that all the bookmarks are in A – Z order. Drag that folder back into the editing pane (yes, you'll now have two copies of the folder). Open it and lightly gasp when you see that the bookmarks have maintained their alphabetical ways. You may now delete the unsorted bookmarks folders.

TIP: ADDING ARTWORK IN iTUNES 12

iTunes 12 has changed the Info window, which appears when you select one or more items and press ⌘-I. The old window had an Artwork well, where you could either drag or paste graphics to add album art to your files. In iTunes 12, the Info window is different.

Note that the window you see above displays information about files that already have album art, but it doesn't show that album art when you select multiple items. (The iTunes 11 Info window didn't show graphics in the Artwork well either.) There are now three ways to add album art to your files:

- Click the artwork square at the top-left of the window – the one with the musical notes – and it becomes highlighted. You can paste a graphic that you've copied to your clipboard by pressing ⌘-V or you can just drag a graphic onto that square.
- Click the Artwork tab and either paste a graphic or drag it onto that pane.
- Click the Artwork tab, click Add Artwork, choose a file that's anywhere on your Mac, such as one you've downloaded, and click OK.

These techniques work for multiple items, such as the songs on an album, or for single items, such as a movie or TV show.
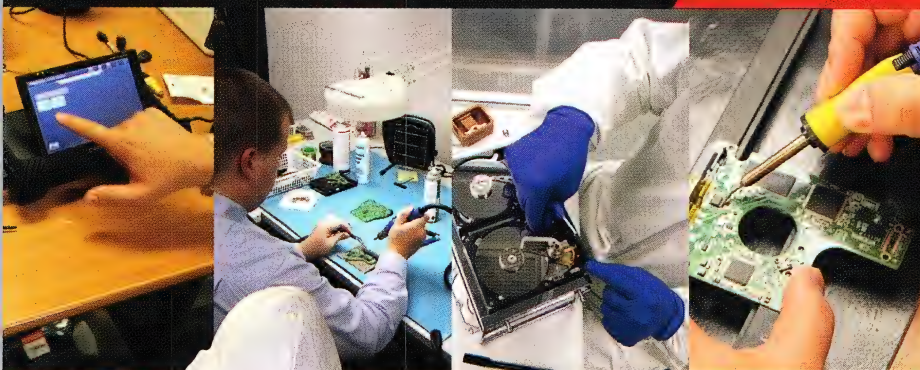
Fitness headphones

Heading out for a run? And don't want to leave your music behind?
ANTHONY CARUANA trials four of the best headsets on the market.

Jabra SPORT Stereo Headset

Jabra's SPORT Stereo Headset looks the part. With its bright yellow trim and rubberised casing it has a sporty feel.

We paired the headset to an iPhone 6 and took it out for a run. Although it was reasonably comfortable to wear, we found that the headset kept slipping and falling out of our ears despite trying all three different earpieces. We also had another person try them, to ensure that our ears weren't the problem, and they had the same issue.

The controls on the SPORT Stereo Headset were difficult to operate as well. The buttons were hard to find while wearing the device and we found that pressing the buttons required a firm enough push that we ended up dislodging the headset. So, while the volume toggle and play/pause button were functional, they were hard to use.

Battery life is rated at four hours for music playback – a figure we were able to achieve in our testing and long enough for most recreational exercisers.

As well as listening to music, you can receive calls using the SPORT Stereo Headset as there's an in-built microphone. It's also very durable. Jabra has tested it to US military grade for rain, shock and dust protection.

Sound quality was very good. One benefit from the less than snug fit was that we could still hear some ambient noise. This is important from a safety point of view. We could also have the SPORT Stereo Headset simultaneously paired to two devices, which made it handy for listening to tunes in the office and as a headset with our Mac for FaceTime.

Bottom line. The Jabra Headset offers very good sound and boasts a sporty look, but the controls were a little difficult.

JayBird BlueBuds X

When it comes to wireless headphones for when you're exercising, fit and comfort are critical. The JayBird BlueBuds X fit the bill and deliver excellent sound as well.

Like many earbuds, the BlueBuds X come with several different silicon tips, so you can play with them to find the best fit for your ears. They're also extremely light, so they're unlikely to bother you on a run. However, while they were confortable for us, another tester couldn't achieve the same level of comfort.

The sound quality was excellent. The thing about transmitting music over Bluetooth is that some compression is applied to the audio to ensure a steady audio stream. JayBird uses a custom implementation of the native Bluetooth SBC codec, which JayBird calls Shift. The end result is clear sound, although a big part of the sound quality will depend on how well the earbuds fit as a seal that blocks ambient sound is important.

Controls are reasonably easy to use with the play/pause button also used for answering calls and redialling the last number depending on how many times you press it. The integrated volume control also lets you skip back and forth between tracks if you hold it.

As with all the other headsets we tested, charging relied on a micro-USB connection with the socket hidden under a small cover. Once fully charged, the BlueBuds X could deliver eight hours of life – enough to get most exercisers through a week of workouts. As the battery life drops, a pleasant voice lets you know so the music doesn't cut out without warning.

Bottom line. While priced as a premium product, the JayBird BlueBuds X are a great option – as long as they fit you well.

$130 / JABRA
www.jabra.com.au

PROS Sound quality; light

CONS Fit; difficult controls

$199.95 / JAYBIRD
www.jaybirdsport.com

PROS Comfort; battery life; sound

CONS May not fit everyone well

Plantronics Backbeat Fit

When it comes to quality personal sound, Plantronics may not be at the top of the list of recognisable brands, but it has a long pedigree in delivering audio accessories. The Backbeat Fit headset lets you listen to music and use your phone.

In our view, great sports headphones start with fit and comfort. Our first impression was that the Backbeat Fit headphones were very easy to put on and comfortable. The in-ear design fitted snugly without feeling like they were driving too deeply into our ear canal. The over-the-ear loop was soft and didn't cause discomfort.

However, once we were out on the road, we found that they moved around and needed to be adjusted.

Sound quality was good without being brilliant. We listened to several different styles of music and, while they were good enough for training in, exercising audiophiles won't be satisfied. On the upside, we could still hear ambient sounds such as traffic and cyclists who rang their bells as they were passing us – an important safety consideration and a reason why exercise headsets shouldn't have complete sound block out.

Most of the controls on the headset were easy to access, although the power switch is hard to find. That's probably not a bad thing as it means it's hard to accidentally hit while answering a call or changing the volume using the controls on the earpieces.

Charging is via a micro-USB port hidden under a small cover that ensures no moisture gets into the port. Battery life is rated at about five hours – enough to cover the exercise needs of most people for a week.

As a bonus, the Backbeat Fit headset comes with an armband for carrying your iPhone while training. However, we found that one of the seams caused chafing after about an hour's use – as a result, we wouldn't use it.

Bottom line. The headset moved too much during exercise and, while light, the sound wouldn't impress audiophiles.

Beats By Dr. Dre PowerBeats2 Wireless

Beats has established a big reputation when it comes to providing sound quality and the PowerBeats 2 Wireless headset delivered, although at a premium price.

Once we had the PowerBeats2 connected to our iPhone via Bluetooth, we put them on for a run. The over-the-ear fit worked very well. Although getting them on was a bit of a challenge, once they were secured they were comfortable. Out on the road, they stayed in place – there was no need to adjust or fiddle with them to keep them in place, allowing us to concentrate on our activity. There are four sets of ear tips, designed for different sized and shaped ears, so we'd expect the majority of people to find a comfortable option.

Where the PowerBeats2 excelled was sound quality. Whether we were training, sitting on a train or at home, we enjoyed listening to our favourite music through these headphones. However, the downside to this immersive sound is that ambient noise is less discernible. That means either keeping the volume lower or paying more attention to what's going on around you.

Charging is via micro-USB with battery life rated at around six hours – more than enough for the needs of the majority of trainers and to get through a day of commuting as well.

As you'd expect from a set of sports headphones, the PowerBeats2 are water resistant. They are certified to the IPX-4 standard, which means water splashing against them won't have any deleterious effect. The standard tests this at 10 litres per minute over a five-minute period.

Bottom line. We really liked the headphones. Sound quality, battery life and comfort mean these will satisfy the needs of exercisers who like to listen to tunes while they train.

$147 / PLANTRONICS
www.plantronics.com/au

PROS Very light

CONS Armband design; fit

$259 / BEATS BY DR. DRE
au.beatsbydre.com

PROS Excellent sound; great fit

CONS Difficult to put on

Withings Wireless Blood Pressure Monitor

If you don't mind the extra cost, you'll find that taking your blood pressure is less of a hassle.

L ike millions of people, I need to keep an eye on my blood pressure. You can check it when you visit your doctor, but many people have 'white-coat hypertension.' Just getting their blood pressure measured at the doctor's office stresses them out, resulting in higher than normal readings. All the better reason to check it at home.

At $189.95 from the Apple online store, the Withings Wireless Blood Pressure Monitor isn't competing on price, but rather convenience. Saving money doesn't matter if you don't wind up using the device, and Withings' version makes checking your blood pressure a lot easier.

USING THE MONITOR

Withings had originally offered a wired blood pressure monitor: it connected to an iOS device's 30-pin dock connector. You can still find some of these for sale, but if you have an iOS device with a Lightning connector, you'd need an adapter. The new wireless model uses Bluetooth, making it a cinch to use, and also offering Android compatibility.

The device is bulky, with an aluminium tube that contains the hardware to pump up the cuff and the batteries, which is attached to the cuff itself. It's an all-in-one device, with no tube connecting the hardware to the cuff. The cuff is rigid, and you have to pry it open a bit to get it around your arm; you then attach it with velcro and it's ready to go.

To take measurements, you first press a button on the blood pressure monitor, which wakes it up and launches Withings' Health Mate app on your iOS device. Then tap Start to have the cuff inflate and begin measuring your blood pressure. When it's finished, readings display in the app: systolic and diastolic blood pressure, and your pulse.

Some doctors recommend taking three measurements and averaging this. Withings calls this Automatic Mode, and you can turn it on in the settings when the Health Mate app is waiting for you to tap Start.

I found the device to be a bit finicky at first. I got measurement errors and had to restart. The cuff seems more sensitive to exact positioning than other devices I've used, but once I got the hang of positioning it, it worked fine.

VIEWING YOUR DATA

As for the Health Mate app, I found it confusing at best. Its display isn't very intuitive, its Dashboard view shows the last reading and a vague graph, and its Timeline shows graphics that seem to have no relationship to your history.

The app does work with Apple's Health app. You just open Health's settings and choose to import data from the Withings app. Unfortunately, the Blood Pressure display in Apple's app isn't much better – it has white data points on a grey background, and isn't very readable.

However, Leading Edge Apps' iBP Blood Pressure app can connect to your Withings account and download the same data. This app has a much better display, offering graphs with trend lines, timelines and averages. You sign into your Withings account, them manually fetch the new data. You can then view the data in the iBP app, and easily export it in multiple formats, if you want to send it to your doctor.

Bottom line. With this wireless blood pressure monitor, you're certainly paying a premium for convenience, but it is much easier to use than standard devices. I'd have expected some sort of carrying case, as most blood pressure monitors provide, but there is nothing. If you don't mind the extra cost, you'll find that taking your blood pressure is less of a hassle.

– KIRK MCELHEARN

APPLE
apple.com/au

PROS Wireless; all-in-one convenience

CONS Expensive

$189.95

Drobo Mini

The Drobo Mini can be a compelling storage device for somebody looking for protected storage and nothing else.

If you're looking for a traditional RAID enclosure, the Drobo Mini probably isn't for you. If you're looking for a fast multi-drive enclosure, the Drobo Mini *really* isn't for you. The Drobo Mini is geared toward people who don't know, and don't want to know anything about RAID, who may have a handful of drives they'd like to put to use.

With a Drobo Mini you don't have to use identical drives, or even drives with the same capacity or speed. You can throw a 80GB drive and a 500GB drive in a Drobo and it'll give you as much protected storage capacity as it can without you having to do anything. That said, the Drobo doesn't always act as you may expect, and the extreme ease of use comes at the cost of performance.

USING THE DROBO

The most compelling feature of Drobo Mini is its ability to take drives of varying capacities and render a large chunk of protected storage space back to the user.

However, there are still some limits to the usable space you get when mixing drive capacities in a Drobo. For example: I had four 480GB drives, and the resulting 1.33TB of usable protected space was running out. I rustled up another drive from somewhere in the lab and swapped one of the 480GB drives with a 960GB drive. Back at the Drobo Dashboard it was still telling me I was low on usable space, and instructed me to replace yet another drive.

Providing redundancy for your data is Drobo's whole deal, so the Drobo Mini isn't going to let you use space that can't be protected by the other drives currently in the enclosure. Drobo puts that extra capacity aside until you swap another one of your drives for one with a higher capacity.

Drobo has capacity calculator online that helps you get a feeling of the storage space you'll have available with different capacity drives. So be very, very sure to check the capacity calculator before considering a Drobo, and before buying any new drives that may go into your Drobo.

PERFORMANCE

Don't expect blazing fast speeds from your Drobo Mini, even with SSDs. The way it manages your data behind the scenes makes it incredibly easy to use, but does end up cutting into performance.

Writing to the drive, I saw speeds up to 242MB/s when dealing with large files, and up to 171MB/s when dealing with a collection of files and folders. Reading from the drive, I saw speeds up to 346MB/s when dealing with large files, and up to 236MB/s when dealing with a collection of files and folders. Remember, that's with four 480GB SATA III SSDs.

I also tested the drive with four 1TB 7200-rpm 2.5in drives, which gave me 2.67TB of usable space. Writing to the drive topped at 197MB/s with a single file, and 90MB/s writing a group of files and folders. Reading a single large file maxed at 316MB/s, but reading a group of files and folders was a lot slower, topping out at 66MB/s.

If you're looking to invest in a Drobo Mini, stick with rotational drives unless money isn't a factor to you – or you just happen to have a bunch of 2.5in SSDs lying around unused for some reason.

Bottom line. The Drobo Mini isn't meant to compete directly with traditional RAID options. The drive is intended for people who need protected storage rather than fast speeds, and don't want to learn about RAID. If you're using some old drives you have lying around to create some protected storage for a technophobic relative, it can be a compelling choice. If you want something customisable or with blazing fast speeds, you may want to read an article on RAID.

– ALBERT FILICE

MACFIXIT AUSTRALIA
www.macfixit.com.au

PROS Super easy to use; can be used with any combination of 2.5in drives

CONS Swapping drives doesn't always give you more space; poor performance, even with SSDs

$629 (ENCLOSURE ONLY)

Creative Sound Blaster X7

Audiophile performance without the audiophile price.

The Sound Blaster X7 is an affordable audio powerhouse with just two intertwined shortcomings: there's no HDMI in or out, so there's no support for high-resolution movie soundtracks on Blu-ray discs.

The SB X7 has an integrated Texas Instruments TPA3116D2 Class D digital amplifier that can drive a pair of either 4- or 8-ohm speakers. Flip a switch on the back panel to correspond to the speakers you're connecting to it. Gold-plated binding posts support bare-wire, spade or banana-plug connections.

Creative rates the amp to deliver 38 watts per channel to 4-ohm speakers with the included 24-volt, 2.91-amp power supply. Upgrade to Creative's optional 24-volt, 6-amp power supply and you can drive 4-ohm speakers at up to 50 watts per channel. Using 8-ohm speakers? Creative rates the amp at 27 watts per channel with the stock amp, but it doesn't provide numbers for the optional PSU.

If you'd prefer to use self-powered speakers, you can bypass the internal amp and connect up to six powered speakers (front stereo, rear surrounds, a centre channel and a subwoofer) using its line-level outputs. You can also deploy passive stereo speakers and a powered subwoofer, because all of its inputs and outputs can be used simultaneously.

CONNECT ALMOST ANYTHING

You can connect both analogue and digital audio sources using stereo RCA jacks and TOSLink optical inputs.

There's a TOSLink output, too. The SB X7 has a micro-USB connector (with asynchronous mode and ASIO support to reduce jitter and latency respectively) for streaming digital audio from a Mac or PC, and a USB Type A receptacle that can host a tablet or smartphone if you want to stream audio from those devices. If you prefer wireless streaming via Bluetooth, the SB X7 supports that, too.

AUDIO EFFECTS

Not all tracks offer the highest fidelity, but Creative's Crystalizer software can very effectively restore life to them. Other SBX Pro Studio effects let you add a pseudo-surround-sound effect and boost bass response (as well as adjust the crossover frequency), using sliders in the apps or Windows software to control the impact of each effect.

Gamers, meanwhile, will appreciate some of the other SBX Pro Studio effects. If you like to play stealth games and first-person shooters, enabling Scout Mode will give you an edge by amplifying certain audio events to help you detect an approaching enemy. And if you play multiplayer games that support voice chat, Creative's CrystalVoice FX enables you to modulate your voice in all sorts of ways. You could sound like a giant or a web-footed alien.

The apps also provide mixers, equalisers, speaker calibrators and other tools. A button on the front panel enables or disables all the SBX effects you've activated using the control software.

WORTHY OF YOUR ATTENTION

I evaluated the Sound Blaster X7 with both headphones (Bowers & Wilkins' P5 and Ultrasone's HFI-2400) and a pair of Chane A1rx-c loudspeakers. Both experiences were exceptional. None of the headphones I own are particularly difficult to drive, so I couldn't evaluate Creative's claim to be able drive up to 600-ohm headphones. But my experience with the phones I do have was exceptionally good.

When connected to the 8-ohm loudspeakers, the SB X7's amplifier had no problem filling my small home theatre with sound.

Bottom line. I lament that it doesn't support HDMI, but including that would have driven up its cost. Apart from that, Creative selected exactly the right components to stuff inside this little box, and it didn't waste a dime on fancy materials or anything else that doesn't contribute to its sterling price/performance ratio. Highly recommended.

– MICHAEL BROWN

CREATIVE
au.creative.com

PROS Nearly every digital and analogue I/O port you could want; audiophile components; high-quality USB and Bluetooth audio streaming

CONS No HDMI support; can't decode high-res Blu-ray soundtracks; no support for AirPlay

$459.95

Accounts - multi-company & currency, parent child, multi address, integrated google maps, CRM - **Payroll** - payrun, superannuation, superannuation adjustment, next of kin, company, department, class, multi-award, RDO, cost splitting by department, multiple bank accounts, leave loading, allowances, child support, leave loading, rebates, salary packaging, commission structures, salary sacrifice, workers compensations, unlimited super funds per employee, annual leave, long service leave, carer & personal leave, future leave, accumulators, employee log file, Statement of Leave, payrun log, service, loan, reversals, capital allowance schedule - **Job Projects** - resources, activities, time sheets, allocations, job project invoices, job project credit memos, details, cost, analysis, job project financials, planning and quoting, billing, GL budget, resource & project gantt charts, tracking notes - **Inventory** - manufacturing, bill of materials (BOM) , size/colour style matrix, unlimited barcodes per product, formula pricing, hire, lay by, multi-shop, batch and serial number tracking, inward goods, arrivals & deliveries, resources, price-book, multiple locations, multi-department, open to buy forecasting integrated emailing, document management, integrated soft phone. Sales reps, quotes, orders, invoices, requisitions, purchase orders and purchases, delivery run maintenance, dashboards, show reports, stocktake entry, transfer entry, build entry, unit demand, manifest, manager, asset purchase - **Management** - statement of position, months activities, cash & account movements, tax calculation, auditing tools, FX currency settings - **Assets** - passwords, password management, location management, tax and company depreciation, serial number tracking, warrantee storage, insurance details, barcode, company and tax valuation, computer equipment details, disposal, purchase, revaluation, repair, service, loan, reversals, capital allowance schedule - **Utilities** - User access inquiry, system controls, master defaults, remote access defaults, co inquiry, department inquiry, task inquiry, organisation chart, work flow rules inquiry change menus and names, server administration, web server - **Workbook** - CRM contac... ...nts, tracking notes - **System wide** - document management, CRM ... ...cessor spreadsheet, wysiwyg report writers, SQL databas...

www.sapphireone.com

1Password 5.0

This Mac app offers state-of-the-art protection for your passwords and more.

Apple's software ecosystem suffers from no shortage of apps dedicated to password management; among these, AgileBits' 1Password has always occupied a genre-defining role as one of the most comprehensive solutions available. Its latest release, 1Password 5.0, is no exception.

IN WITH THE NEW
One of the hardest feats to pull off in software development is designing a user experience that feels familiar and yet conforms to new paradigms. On one hand, you don't want the app to look dated or out of place in its intended running environment; on the other, you don't want to introduce changes so drastic that existing users will suddenly find themselves disoriented and incapable of performing tasks that were hitherto second nature to them.

Launched to coincide with the release of OS X Yosemite, 1Password 5.0 aces this particular problem by limiting its user interface changes to a fresh coat of paint that looks perfectly at home inside Apple's latest operating system. With the exception of a little more flatness, therefore, you can install the new version over the old one and continue using it without skipping a beat.

The 1Password Mini helper app (which sits in the menu bar and provides a quick way to grab a password or credit card number without having to launch 1Password), has received more significant interface changes. In its latest incarnation, the helper sports both dark and light interfaces to match Yosemite's menu bar, and can be quickly invoked with a global keyboard shortcut that makes it appear in the middle of your primary screen. Again, no paradigm-shifting changes, but a few nice touches that, as a frequent user of this feature, I've found very useful.

IN WITH THE OLD
Outside of these cosmetic changes, most of the functionality provided by 1Password remains unchanged – not a bad thing if you consider that the established user interface works very well. Of note, the iCloud sync functionality has been rewritten from scratch using the new CloudKit framework, which will hopefully bring increased stability to those who choose to store their 1Password vault using Apple's cloud storage solution.

One feature that I think will get more use is the ability to securely share passwords and other bits of private data. This has existed inside 1Password since at least version 3, but was rarely used by regular users, if only because online privacy and security issues affected just an unlucky few.

Given Apple's big push in this arena – and the birth of technologies like Family Sharing – I expect that 1Password's sharing will be more commonly used. Given that, I hope that AgileBits will find ways to improve the functionality to provide multi-user sync in the future. E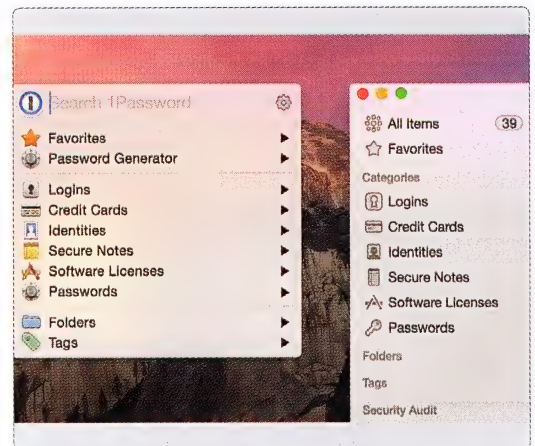ven though password sharing is generally frowned upon in the security community, it is sometimes necessary when dealing with service providers that don't allow multiple logins to the same account (a more widespread problem than you'd think, particularly in the IT community).

Bottom line. As a well-supported app that receives frequent updates, 1Password 5.0, which clocks in at just under 31MB and requires Yosemite to run, is well worth its $64.99 price – particularly if you consider that, if you already own a copy of version 4, you will be able to upgrade for free.

The price of the app is even easier to digest now that you can purchase a single copy from the App Store and share it with every member of your family through Family Sharing. Not only does this give you an opportunity to introduce your loved ones (particularly children) to the importance of good password practices, it also allows you to spread the safety 1Password provides to all your data, and at no additional cost. This is a great deal by any measure.

– MARCO TABINI

Significant change. 1Password Mini, which sits quietly in the Menu and gives you quick access to your vault without having to launch the full app.

AGILEBITS
agilebits.com

PROS Interface tweaks make 1Password easier to use; more stable syncing; licence can be shared through Family Sharing

CONS Occasional clash with iCloud Keychain

$64.99

Defense Grid 2

Still the best tower defence game, but the magic's missing.
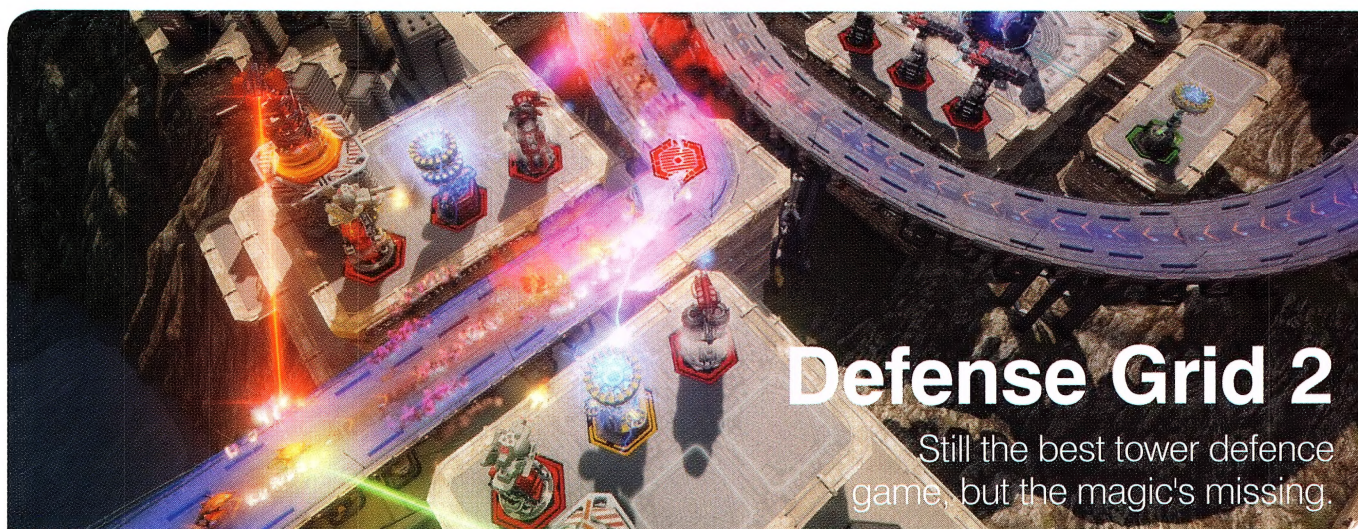
I don't know how many tower defence games I've played at this point. But the original *Defense Grid* is without doubt one of the best (maybe *the* best) tower defence games ever released.

Defense Grid 2 is more *Defense Grid*. It's a tightly-tuned, gorgeous tower defence game set against an epic science fiction backdrop where you commit mass genocide against a host of alien baddies in order to protect your base(s). It's also really good. Except maybe not as good as its predecessor. Or maybe it's just too similar to its predecessor. It's hard to tell.

I KNOW YOUR FACE

In terms of the amount of content built for *Defense Grid 2*, there's more than enough here to call it a sequel. There's a decently long campaign with a fully-voiced story that plays out a bit like a weird radio drama (considering you never see any of the characters who are speaking). As with *Titanfall* earlier this year, the all-audio format makes it next to impossible to keep the characters and plot straight, so… good luck. Minute-to-minute, the dialogue is quirky enough though that it doesn't really matter.

Defense Grid 2 plays almost exactly like its predecessor though. The big thing that set the original apart – the ability to build new paths with your towers in order to force enemies into longer, more circuitous

routes – returns. In fact, *Defense Grid 2* doubles down on the labyrinth-building aspect of the game by adding in a new 'Boost Tower'.

The Boost Tower isn't a weapon, per se. It's a box. A crate. It doesn't cost much compared to building an Inferno Tower or a Cannon or what have you, so you can throw down a bunch of them with relatively little overhead and build out the walls of your shooty-death-trap. You can also build guns on top of Boost Towers, and then upgrade said Boost Towers to inflict more damage.

That's really it, though. That's the big addition to *Defense Grid 2*, plus the new campaign, plus the new multiplayer modes. It's not bad value, per se, but if you've already played hundreds of hours of the original *Defense Grid* there's no magical spark here to bring you back, no surprises lying in wait.

And there are some parts of *Defense Grid 2* that I think are actually weaker than the original, particularly when it comes to split-second judgements. Tower defence is, at its core, a strategy genre. Strategy relies on information – on knowing the right information at the right time.

Defense Grid 2 is remarkably bad at conveying information to the player. Tower types are hard to distinguish from each other and alien types are even harder to decipher. When you're looking at a mass of 20 oncoming mobs and trying to figure out 'Are

these the fast ones? Are these the ones that turn invisible?' then there's a problem. That information should be immediately apparent. The same goes for 'Is this my cannon tower? Oh wait, no, it's this one over here.'

I don't know what the problem is, because I don't feel as if I had the same issue with the original *Defense Grid*. There's something about the way it's laid out though, or how far out the camera is, that makes the game less playable than its forebear – even though it's 90 percent the same game.

Bottom line. *Defense Grid 2* isn't bad. It's actually really good! The original *Defense Grid* managed to get people momentarily excited about tower defence again by being something unique and different from the crowd. Fair or not, *Defense Grid 2* needed to pull off the same magic. It doesn't. It's just another (excellent) tower defence game.

– HAYDEN DINGMAN

HIDDEN PATH ENTERTAINMENT
www.hiddenpath.com

PROS Plenty of replay value for each level; boost towers provide new labyrinth strategies

CONS Not much to add to the tower defence genre; campaign story is hard to follow

US$24.99 (VIA STEAM)

GoPro Hero4 Black

If you need to capture your daredevil exploits in Ultra High-Definition, then the GoPro Hero4 Black may be the right action camera to strap to your helmet.

The GoPro Hero4 Black is small enough to fit in the palm of your hand and only weighs 87g, or 152g with the protective case. Don't be deceived by its tiny size, this little camera captures amazingly vivid and sharp video. The lens has a fixed f2.8 aperture, doing a great job in mixed lighting conditions and not blowing out when pointed directly at the sun. It also shoots time-lapse videos and long exposures with a night lapse mode for budding astrophotographers.

GoPro's top-of-the-line model, the Hero4 Black handles up to 3840 x 2160 Ultra HD video capture at 30 frames per second, along with 12-megapixel still photos with a 30fps burst mode. There are cheaper GoPro models, like the Hero4 Silver, which only captures Ultra HD at 15fps, or older models, which only go as high as Full HD 1080p.

If Ultra HD seems like overkill, you can decrease the Hero4 Black's video capture resolution and increase the frame rate up to 120fps – offering smoother slo-mo video. You can also adjust the lens' fish-eyed Field of View, depending on how much you want to see in the picture.

The Hero4 Black is designed for the great outdoors and comes with a sturdy waterproof case, which connects to a wide range of mounts.

GoPro supplies adhesive mounts and a pivot arm for attaching just about anywhere, but you can buy additional mounts and there's also a Music edition designed to strap to instruments.

One thing missing is a rear screen for playing back videos. There's one built into the Hero4 Silver, but with the Black it's a detachable optional extra. This may not be necessary if you have an Apple or Android gadget at hand, because you can use the GoPro app to view the live feed from the camera, adjust the settings, press record and then playback your clips to see if you got the perfect shot.

The Hero4 Black's Achilles heel is the built-in microphone. It's an improvement on previous models, but still sounds disappointing when the camera is sealed up in the waterproof case. Switching to the open-backed rear door improves the sound, but dialogue still sounds muffled and it's best used as an effects mic. If you need great audio, you can attach an external mic via a micro-USB to 3.5mm adaptor, but then you'll need to buy a different protective case, which offers access to the micro-USB port.

The micro-USB port also lets you recharge the camera and copy files from the micro-SD card. The camera shows up as standard USB storage when attached to your Mac, but

demands extra drivers for Windows. There's micro-HDMI for connecting to a monitor.

You'll fit 16 minutes of Ultra HD 30fps video on an 8GB micro-SD, 30 minutes of 1080p at 30fps or even more if you drop the resolution further. The camera produces MP4 files, which play in QuickTime, but they need an edit before you can transfer them to your iGadgets. You can import them into iMovie or the free GoPro Studio, even if your monitor can't match the resolution of the video. Of course, to truly do Ultra HD justice you'll want an Ultra HD television or monitor.

Bottom line. It's an amazing piece of kit, but the GoPro Hero4 Black is overkill if you'll never shoot in more than 1080p. Make sure you weigh it up against the Hero4 Silver and the cheaper GoPro models to find the best match for your requirements and your budget.

– ADAM TURNER

GOPRO
www.gopro.com

PROS Ultra HD 30fps

CONS Expensive

$679

Virtualisation on the Mac just got a power boost.

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